The

British Medical Journal

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

SEP 16 1927

EDUCATIONAL NUMBER, SESSION 1927-1928.

No. 3478. SATURDAY, SEPTEMBER 3, 1927. Price 1/3

FOUNDED MIA 1907

BUSINESS SERVICE

The continued confidence of its clientele is a sure sign that the service can be relied upon. This is what

THE MEDICAL INSURANCE AGENCY ENJOYS

If you have not already consulted the M.I.A. on any or all matters relating to your insurances you are cordially invited to do so. The advantages are:

1. *You obtain expert and unbiased advice* — FREE
2. *You effect a saving on premiums payable* — YOUR BENEFIT
3. *You indirectly help the Medical Charities* — A GOOD OBJECT
4. *You may rely upon the Agency to protect you* — OUR PLEASURE

For Life, Endowment, and Children's Assurances, Annuities, Motor Car, Household, Fire, and Burglary Insurances, etc.

WRITE TO

THE MEDICAL INSURANCE AGENCY,

British Medical Association House, Tavistock Square, London, W.C.1.

THE M.I.A. EXISTS TO PROTECT YOUR INTERESTS AND SAVE YOUR MONEY.

Schering

Atophan

Promotes rapid excretion of uric acid and has powerful antiphlogistic, analgesic, and antipyretic properties.

Indicated in

Gout
Rheumatism
Sciatica
Lumbago

and all diseases associated with the uric acid diathesis.

Powder. Tablets, 7½ grains.

Veramon

Promptly relieves pain without inducing sleep or any unpleasant after-effects.

Indicated in

Headache
Neuralgia
Labour Pains
Dysmenorrhœa

and "all possible forms of painful conditions."

Powder. Tablets, 6 grains.

The Safe & Soluble

Tablets, 5 and 7½ grains.

Medinal

Sedative & Hypnotic

Cachets, 5 and 10 grains.

CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING) BERLIN N. 39.

Samples and literature on request from the importers:

SCHERING LTD., 3, Lloyd's Avenue, LONDON, E.C.3.

Telephone No.: ROYAL 7580. Telegraphic Address: "SCHEROPHA, FEN, LONDON."

X-RAY APPARATUS

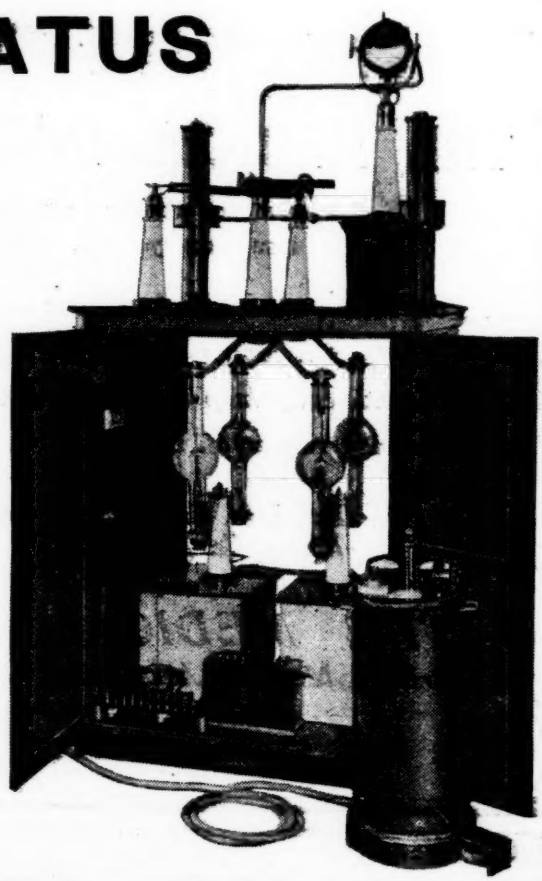
of QUALITY

CONSTANT VOLTAGE THERAPY SETS, TRANSFORMER SETS, WARD TROLLEY SETS, COUCHES, SCREENING STANDS, etc.

ELECTRO-MEDICAL APPARATUS

X-ray Units from £95

Catalogues sent on request



The "SOLUS" Electrical Co.

X-ray Specialists,

100, JUDD STREET,

LONDON, W.C.1.

Telephones:
MUSEUM 2829.
FITZROY 1539.

Telegrams:
EXRASOLUS, PHONE, LONDON.

THE

British Medical Journal.

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

LONDON: SATURDAY, SEPTEMBER 3RD, 1927.

EDUCATIONAL NUMBER. SESSION 1927-28.

An Address
ON
AMERICAN METHODS IN MEDICAL EDUCATION.

DELIVERED TO THE CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS IN THE HÔTEL-DIEU, MONTREAL, OCTOBER, 29TH, 1926,

BY

SIR ANDREW MACPHAIL, KT., O.B.E., B.A., M.D., C.M., LL.D., M.R.C.S., F.R.S.C.,
PROFESSOR OF THE HISTORY OF MEDICINE, MCGILL UNIVERSITY.

MONSIEUR LE PRÉSIDENT ET MADAME LA RÉVÉRENDE MÈRE SUPÉRIEURE: Dans cet Hôtel-Dieu, cet hôpital de Dieu, le foyer de la médecine au Canada, il y a trois siècles, sanctifié par la dévotion de vos sœurs et par la mémoire de Jeanne Mance, il peut se faire que l'esprit de ce milieu descende sur nous. Sous l'influence de cet esprit nous pourrions découvrir que la nature n'est qu'une expression casuelle de la volonté divine; que l'être idéal suit l'ordre de la nature, et vit en accord avec cette volonté; que le malade a failli,—corps et âme. Tout ce moderne tâtonnement scientifique pour trouver l'effet de l'âme malade sur le corps malade n'est que l'effort pour découvrir le secret que vous n'avez jamais perdu, le pouvoir de la religion. C'est un effort pour répondre à la question du Maître: *Quid facilius est dicere: Dimittuntur tibi peccata tua, an dicere; Surge, ambula.* Peut-être, au moins, apprendrons-nous en ce milieu, l'humilité d'Ambroise Paré: *Je l'ai pansay; Dieu le guarit.* Cela est la science définitive.

Gentlemen: I was merely saying a few words to the Reverend Mother Superior, who has left her cloister to honour us with her presence.

The principles of surgery I learned from a pupil of Lister. Operative surgery I observed under the hand of that first of modern English surgeons, at the time when he was perfecting the operation for perityphlitis, the term by which in those days appendicitis was described. In the intervening years surgical principles have not changed. Surgical procedure has developed; any change is one of natural growth. But education in those principles and in the methods of practice in surgery and medicine have so changed that we are now in a new world.

To restrict my theme within the compass of an hour, I have chosen to examine American methods alone. As I am speaking to the American College of Surgeons I shall further restrict my scheme mainly to surgery; and as you honour us with your meeting in Montreal, I shall consider those methods only in so far as they affect the development of our own education. To appraise their effect upon yourselves would be an impertinence: your institutions are sacrosanct to you, and not to be touched by an alien hand. The fate of Uzza shall be my warning.

Those methods invade this country by four routes. The American Medical Association, through the Council on Medical Education and Hospitals, inspects and classifies our medical schools; the inference drawn from that inspection has been published at irregular intervals. The Association of American Medical Colleges inspects all schools within its membership. Most schools have eagerly sought, or accepted, an invitation to come within the circle. Few schools have had the hardihood to decline that jurisdiction, willing to incur the invidious distinction of standing alone. The Boards of many States will grant licences only to graduates of schools specified by the American Medical Association. Finally, the American College of Surgeons inspects and grades our hospitals, and so the influence is complete. There yet remains, however, the less official operation of the Carnegie Foundation for the Advancement of Teaching, and the Rockefeller Foundation; but these are not of pressing importance to our theme. They have spent vast sums of money upon us; but no further expenditure seems to be imminent, and never at any time did they seek to exercise sequential control.

Proceeding still further with these self-denying restrictions, I shall define the modern period as beginning in 1876, the year in which Johns Hopkins was founded, and more especially with the year 1910, in which the Carnegie Foundation brought us face to face with the revival of medical education in the United States. Up to that time we had been left free to develop our own inherited methods in native obscurity. In these sixteen years our medical education has been profoundly altered, and it is of this period I shall continue to speak.

In the year 1910, the beginning of this modern era, an exhaustive survey of medical education in the United States, which had been undertaken five years earlier for the Carnegie Foundation by extremely competent observers, was complete. Their researches were extended into Canada, and the results were published in Bulletin Number Four by Abraham Flexner with an introduction by Henry S. Pritchett, the President.

The necessity for such a survey in the United States was apparent. The President declared that certain facts were revealed—namely, that there was in that country "an enormous over-production of uneducated and ill-trained medical practitioners; that there was a very large number of commercial schools sustained in many cases by advertising methods, through which a mass of unprepared youth was drawn into the study of medicine." With those conditions we in Canada were not especially concerned, but we are entitled to believe from a second report that they have been much altered for the better. We are even yet vitally concerned with the impressions formed upon the minds of those trained investigators by conditions in Canada.

According to their own account (p. 326) the high quality of instruction offered by McGill and Toronto "proves that

our trouble in the United States has been at bottom not less one of low ideals than of low standards. Indeed," they add in general terms, "where ideals are low" [as in the United States] "there are no standards, and where ideals are high" [as in Canada] "the standard, even though low, is at any rate so definite that it furnishes a sure starting-point towards a clearly apprehended goal. The low-standard school in the United States has had no such starting-point and no such goal."

With every desire to be polite, it is useless to pretend that the detailed appraisal of medical education in Canada met with universal acceptance. In so far as it assumed to describe conditions in the Maritime Provinces, the Medical Society of Nova Scotia declared formally that the Report was "prejudiced, inaccurate, and misleading." The answer was to be found in "the good standing and success of the practitioners who received their education" in the school that was condemned.

Without entering too closely into this controversy, it may be observed that when two sets of men, both equally disinterested and sincere, are in profound disagreement, they are thinking in different terms and dealing with different categories. To those American investigators a school meant buildings, equipment, and machinery, or "plant" as they themselves would say. To the medical profession of Nova Scotia a medical school derived its virtue from the quality of the human beings who taught and learned in the school.

This divergence of opinion is disclosed by the procedure of the examiners. They arrived in Halifax at about one o'clock of a Saturday morning by a train which in those days was punctually late. We are not informed what hotel they went to; but anyone who has had a similar experience in Halifax will readily understand that they must have been in a peevish mood. They were determined to leave by the only train shortly after noon. Otherwise they would be compelled to remain in Halifax over the Sabbath. In four hours they visited a university, a medical school, and two hospitals. Their research could not have been very profound; no officer of the school ever saw the delegates, or even knew of their arrival until after they were gone.

Their escape from Queen's University in Kingston was not so easy. Their complaint is that its location "on an inconvenient branch-line greatly aggravates the difficulties due to the smallness of the community." They dealt with externals. Their especial grievance against the London medical school was that the janitor carried the key of the library; but they did not specify by whom, in their opinion, the key should be carried.

The contrary view that virtue lies not in plant alone was fully enforced by Dr. John Stewart at the meeting of the Nova Scotia Medical Society, when the Bulletin was under discussion. He was at that time, and is happily yet, the professor of surgery in Dalhousie, in peace and war the perfect physician, "a pattern" in the old Hippocratic sense. He brought comfort to his colleagues by reminding them that "it is the man more than the laboratory that is essential; that there were no pathological laboratories when Lister developed antiseptic surgery; Koch, a country practitioner in a lonely Prussian village, had no laboratory but what he could construct for himself; Trudeau, alone in the Adirondacks, demonstrated the main facts in our knowledge of tuberculosis." This same John Stewart had learned his surgery from the very Lister himself. We need not wonder that he refused the stigma "mercenary."

How, then, shall we account for those ideals in Canada, which the Bulletin commends, and their absence at that time from the United States, which the Bulletin deplored? We did not create those ideals; we acquired them by inheritance. They were brought by the military surgeons, French and English, who implanted them in our hospitals and schools, primitive as those institutions were. There they were nourished. They yet exist and grow.

Those surgeons in turn inherited them from the schools of Edinburgh, Dublin, and London, and by a collateral inheritance from Leyden, Vienna, and Paris. Those who are curious may trace the stream backward through the French and Italian Renaissance, to Montpellier, Padua, Bologna, and Salerno, even to Alexandria, and finally to the ultimate Kos and Knidos, where those ideals for all time were enunciated by Hippocrates himself.

In the United States, on the contrary, the thread of history was broken in 1776, when those communities cut themselves off from European civilization. For exactly a century the tradition of medicine was lost. It was revived in 1876 by the founders of Johns Hopkins, and was enriched by influences emanating from this country. By the year 1910 these old ideals had so increased in strength in the United States that their new possessors were eager to bring them back in a modified form to us, who had never lost the originals.

They came to us with the demand that we accept the methods equally with the ideals themselves—and most of them arrived by way of Toronto. This dogma might be stated in alternative terms: The conditions were set forth; we were left free to accept or refuse. But the choice was a hard one. Refusal meant the exclusion of our graduates from those rich fields. From that comparatively recent date, 1910, American methods have dominated medical education in Canada, but those methods changed so swiftly that we found ourselves in possession of many of them after they had been abandoned as impracticable by their originators. Many of these American discoveries in medical education are not discoveries at all. Some were discovered long ago, and abandoned as fallacies; others are yet in common use. The out-call service for senior medical students discovered in Nebraska has been a compulsory part of the medical curriculum in Edinburgh for ninety-three years.

Again, the system of preliminary education in the two countries was different. In Canada there were few universities, but many colleges and grammar schools. In the United States there were many universities and few schools leading up to them. In those Canadian colleges, and even in some grammar schools, the teaching was quite as good and quite as comprehensive as in the first year of many universities, American or Canadian either. In the laudable effort to enforce some standard of entrance two years in a university were specified, and we were compelled to conform, else our graduates would be denied admission to practice in many of the States.

As a partial result the course in the Canadian medical schools fell into utter confusion, and many of the calendars still defy analysis or understanding. This confusion was due also to the impossible policy of making the medical faculty responsible for the preparation of students to enter the medical course. This policy has now been abandoned by all Canadian universities except one. I am bound to confess, however, that our obedience to these alien regulations is not so perfect as might appear from our calendars; but we had not far to go for a lesson in the evasion of those laws that do not meet with general approval.

In the best schools for forty years the course was four years in length, whilst in the American schools three years was the exception and two the rule. At McGill the course has never been less than four years for the last hundred years. In the effort to stretch out the course to conform with the new American standard, years called "pre-medical" and "post-medical" were added. The essential of these pre-medical years was that no medicine should be taught. For our students in those days, with their sound preliminary education already acquired in schools and colleges, these years were not so necessary.

For some time the two years in a college or Arts faculty was not absolute. The saving clause "or its equivalent" mitigated the rigour. That saving clause drops out, and a prospective student who wishes to graduate is faced with seven, or at least six years of college and university life. In Dalhousie a student entered the first year in Arts in 1924; last year he was a freshman in medicine; by these changing courses he is again a freshman for the third time. The boy has had no failures, and he does not play football; now he defies the faculty to find another first year for him, but his father gravely fears that technical academic ingenuity has not yet been exhausted. Even after seven years the student has not become a scientist; his aptitude for practice is dulled, his enthusiasm vanished. He has missed the training of a medical corporal, or a

boy scout, and the priceless experience of a nurse. When he begins practice he is too old to learn those homely arts. He is shy of the gift of healing, lest he might fall into the category of irregular practitioners. He thinks his duty done when he gives to the disease a name. According to returns from fifty-two American schools, 59 per cent. of the graduates in 1915 were from 35 to 39 years of age; none were under 30. In 1920 the number between 30 and 34 years of age was 59 per cent., but the average age was even higher.

In the United States it has been found necessary to erect certain barriers, and to segregate sections of the community according to colour, race, and religion. This practice is not new. In England Catholics and Presbyterians alike were at one time debarred from the universities, but all those restrictions were swept away nearly a hundred years ago. In Canada also the medical schools are free to all. As the American schools raise the bars, the surplus falls upon us, and it falls so suddenly that we find some of our classes largely filled with American students—not the average of American students, but many who are deliberately excluded from their own schools.

For four years Dalhousie had not a single American student. In the next year more than half the students came from the United States, and if one can judge by their names, they are precisely those who have been excluded from the American schools. Toronto is a Government institution and may quite properly restrict its students to the province by which it is supported. McGill is a private corporation and has no such obvious means of defence. In the medical faculty more than a third of our time and revenue is devoted to American students, who return to their own country as soon as they graduate.

On occasion students are exported wholesale into our schools. The General Medical College of Chicago was compelled to close six years ago. Through the good offices of the Council of the American Medical Association, students were exported in bulk to Dalhousie, where they were gladly received. They graduate this year and form one-half of the class.

This large number of applicants creates in us a false sense of prosperity. At McGill we limit a year to 100, whilst 500 apply; but these same applicants may apply to several schools, as passengers will put down their names for a berth with several railway companies, and in the end choose the one they think the most convenient. More than half the American students accepted this year had applied to other schools. In the meantime, under this influx, the fees are raised to our own students also, for the university treasurer is human. It now costs a student eight thousand dollars before he begins to practise. That eliminates nearly all but the rich, for the heroic self-supporting student yet remains; it eliminates the son of the general practitioner; it eliminates finally the general practitioner himself, for a graduate who has spent that sum and seven years will not be content with a laborious life and a meagre return.

In the United States the medical schools have diminished from 162 to 79 in the last twenty years; the annual graduates from 5,747 to 3,962; the enrolment of students is 33 per cent. less. A study of 263 rural counties in 41 States by Dr. W. A. Pusey shows the average age of physicians to be 52 years; only 9 per cent. were graduates of the last ten years; no recent graduate has gone into those counties in that period. And the same authority discloses that in 162 of these 283 rural counties 431 non-medical practitioners have settled as against 197 physicians. This striving after an abstract ideal has imposed a choice between a moderately qualified physician and a practitioner with no qualifications whatever.

Few teachers in Canadian schools teach for pay. They are impelled to hand down the tradition of medicine unimpaired and enriched to those who are worthy to receive and willing to transmit that truth in their turn. We do not feel so strongly impelled to pass that tradition to strangers, who from lack of background are unqualified to receive it, who come to us not for love of the Art but for love of gain, and leave the country with what they have won.

This migration is controlled from the United States, and various self-constituted bodies assume that control. They attempt to control our education by specifying what and how much we shall teach, under penalty of excluding our own graduates if we are recalcitrant. Up to the present year the control was even more specific. Inspectors were sent to our schools to ascertain that they complied with those regulations. They classified our schools. When they had filled the schools of the highest class, they raised another to first rank, and that school was promptly sought. If a school refused to be inspected, it was given no standing. American students would not come to it, since their future employment in their own country depended upon the inclusion of their place of graduation upon a technical list. Our own students would deliberate before joining that school, since they would be forever debarred from practice in the United States.

Happily, this control has been relaxed, and the inspection is at an end. Categories of Canadian schools are no longer published. All are presumed to be in the highest class. The event is now only of historical interest, and it is recorded merely as a warning against the future. This happy result, I surmise, is due to the persistency with which our own Dean has represented to you the impropriety of the procedure, and your willingness to apprehend a situation when it is fairly presented. Possibly the excellence of the Canadian schools is now taken for granted; and the increasing excellence of the smaller schools may in a measure be due to some good in that inspection, no matter how distasteful it was at the time.

The pressing demand by Canadian students makes foreign classification a matter of less concern. One Canadian school always seemed to do very well without membership in any American association, without foreign classification, without American students. Queen's classes are full to the limit with Canadian students alone. The Dean affects not to know in what category the school is placed, and his unconcern is so marked that he does not take the trouble to inquire. He surmises, however, that Queen's has been placed in the highest class, since this year he received application from one hundred American students, mainly from the city of New York. He accepted one only, on the ground that his grandfather had been born in Ontario.

The final weapon in your hands is your law that the graduates of Canadian schools which do not accept your methods will be denied the right to practise in the United States. Reprisal is dangerous; but we must, if we cherish our ideals, face that threat and proceed to examine its implications. In that event, we would be left free to bestow our education upon our own students. You would be compelled to educate your own. To educate your students is of no advantage to us. Each student costs us two thousand dollars more than he pays. And if our graduates are restricted to practice in our own country, in our own Empire, in the world at large to which they have now free access, we shall be the gainers. It is conceivable, too, that your people will come to us for surgical treatment. They are already coming in vast numbers for treatment of a much more trivial kind. From its special situation McGill remains free to all students, provided only that they come with a natural aptitude, industry, and love of the Art.

The value of any inspection depends upon the nature of the inspection and the persons who inspect. The inspectors of our hospitals are young persons without other experience. They have never taught, never operated, never come into living contact with the sick. They are in the precise category of employees of a commercial agency which gives a rating to commercial firms. They have their printed questions, their routes, their daily routine. They must report every night their whereabouts and their doings for the day; they are sharply checked by telegraph if there is any omission. "Accept organization"—that is their cry, with the fanaticism of a trade unionist or the fervour of an evangelist preaching salvation.

These inspectors will enter the Royal Victoria Hospital, for example, and demand that all the medical records be exposed to their view. And that great institution complies with the demand. Still more, these young persons undertake to inspect institutions and comment upon records conducted and written in a language which they do not

understand. From this it will be an easy step, in the name of uniformity, forbidding us to teach and record in French.

We in Canada have nothing to conceal. Our medical teaching and practice, English and French, is, and has been for a hundred years, equal to the best in the world. We never descended to the degradation of issuing diplomas for money. Those who desired such were compelled to go to the United States. We never had proprietary schools, save in the sense that the teachers taught without reward, and at the end of each year paid the deficit. But these schools have long since become an integral part of the universities as medical faculties—McGill in 1829, Trinity and Toronto in 1905, and Queen's in 1892. It was a settled policy to appoint professors who gave their full time to special subjects. Prior to 1910 McGill had nine such heads of departments; Queen's had a full-time professor of physiology in 1892, of pathology in 1894, of anatomy in 1903. The progress in other schools was equally marked, and therefore we might properly demand that inspection be performed under our own sanction and not by alien assumption. A man of honour will not object to having his house searched; but the search must be conducted under the warrant of law, and that law must be of his own making.

So that nothing be left unsaid, there is one thing more. The Council of the American Medical Association in Chicago maintains a register of all matriculated students. Each year they send to all American and Canadian schools a form upon which the record of every student is to be given. When these returns were first made the students received a generous supply of advertising "literature" from the United States. The system is now more perfect: the names of rejected applicants also are inquired for. Business enterprise may go too far.

Our existence as a profession, peculiarly protected by law, depends upon our service to the public at large, not alone to the rich, and the indigent who fill the hospitals. To honest men medical service has become a luxury. They are already doing without or drawing help from irregular channels. Partly as a result of professional propaganda, to the sick the proprietary panacea is denied; to the aged the comfort of alcohol; and to those dying in pain the solace of opium. In the end, they may sweep away those privileges with which we have surrounded ourselves; medical practice will be left free to all who care to engage in it, subject only to the restrictions of the common law; the public left equally free to choose the best they can afford. That is the remedy against the theoretically standardized hospital and medical school, and against any profession when it becomes a hieratic caste. It is an outworn convention that a profession is empalisaded solely in the public interest.

I am well aware that American inspectors are making a resolute effort to enter upon our farms, dairies, and factories, to report upon costs and results. Upon their report will depend the duties to be levied on that part of their product entering the United States. Education, learning, and skill are not so easily assessed.

In the United States the supreme law is their own prosperity; and their people are under the delusion that their prosperity means the prosperity of the whole world. No man can live for himself alone; no nation either. Isolated though they are, their domestic legislation concerns the whole world. One of their domestic prohibitions bred a race of native smugglers who, in pursuit of their profession, broke our revenue laws, corrupted some of our officials, directly destroyed our Government, and precipitated a constitutional issue which gravely affects the whole Empire.

To meet the necessity of the moment, you framed certain medical regulations. The need passed. A new situation arose. But the rules in the meantime had become embedded in State or Federal law, and you were powerless to change them. We abandon our regulations when they have fulfilled their purpose, or when we discover we were mistaken. If we find too much difficulty in changing our laws, we change our Government. Last summer we had three successive Governments in eighty-five days. We refuse to be enslaved even by laws which we ourselves have made. You must not, therefore, be surprised if we should change the regulations and laws by which our medical education and practice is governed. Still less need you be surprised if that change should not conform with the methods you have devised for us.

The American method in surgery is an application of the American method in business—uniformity, a single standard, mass production. The desired end is "efficiency." That also is our aim, but we do not believe that the terms of business are valid in the realm of mind and heart. We believe that success in surgery must come through individual freedom, fresh observation, natural aptitude, flexibility of technique, and adherence not to methods but to principles alone. This mechanical method would be, and now is, fatal to us. In the end it will prove fatal to surgery in the United States as well. It was method destroyed medicine in Alexandria, in the Byzantine Empire, in Arabia. The Galenical method lay like an incubus upon the world for a thousand years, until the surgeons of the Italian and French Renaissance discovered anew the principles of Hippocrates. It was finally destroyed by our own Harvey and Sydenham.

The simple answer to my protest is: the value of team work. It is proper to affirm that the value of a team depends upon the driver and the consent of the team to be driven. It also depends upon the foothold. I have watched a team of twenty-two mules struggling with a gun. The more they pulled, the further they sank in the mud—and the gun never stirred.

Under this inhuman system a new kind of physician and a new kind of surgeon have been developed. The physician studies only a part of the patient; the patient is to him nothing more than a series of microscopic slides or chemical solutions. The surgeon knows the patient merely as an arrangement of typewritten cards. He sees him for the first time unconscious on the table, when he comes like a masked executioner to complete the sentence of the judge. Physician and surgeon become sheer empirics, working upon a narrow experimental basis, without philosophical conceptions or even a scientific hypothesis of disease. In pernicious anaemia they will remove the spleen merely because the removal of the spleen appeared to give relief in other cases diagnosed as pernicious anaemia. This practice is far removed from the old injunction: to place the patient, and his friends, and *παντὰ τά ἔξωθεν* in train for his recovery. Surgery and medicine, science and practice, can exist only in one mind. When these are divorced, they become, as Mr. Squire said in another sphere, scientific mules condemned to a stupid sterility.

This domination of the Art by science is not new. Before the protest in Paris in the latter half of the fifteenth century, there was a powerful body of *médecins reclus*, who would not visit or see their patients. These scientists contented themselves with an examination of the patients' excreta, brought by a servant, and sent the proper prescription. They feared lest a look upon the sick man might disturb their diagnosis.

It may be true that "treatment can be logically based only on an accurate knowledge of the nature and cause of the disease"; but disease has a logic of its own that is deeper than the mind of the laboratory. It is a physician, not a logician, the patient demands. The clinical laboratory mind stops short when a manufactured name is given to a disease. The patient is not interested in diagnosis. There is not a drug in the Pharmacopoeia nor a method of treatment in all therapy which was not freely and successfully employed before modern methods of diagnosis were imagined. Artificial immunization, the destruction of one organism by another, the use of arsenic against trypanosomes, was practised by races which had not yet emerged from a condition of savagery. Diagnosis is merely a preliminary intellectual process in the mind of the attendant. Prognosis and cure is what the patient demands; and in the field of prognosis the quack beats us on our own ground. The *Prognostics* of Hippocrates demanded seventy editions in mediaeval times; the important work of Sir James Mackenzie in heart disease had to do not with the past or even with the present condition of the patient, but with his future career. Our own James Stewart possibly went too far in his teaching: never make a diagnosis unless you are compelled to. Professor

Oertel says the same thing when he suggests that the diagnosis be left to him, after he has finished his work at the *post-mortem* table; and that the physician concern himself with the cure.

An ideal may be transplanted; a system cannot. The one may grow: the other will perish on alien soil. And these two countries are alien the one to the other. The resemblance is obvious but superficial; the difference is profound. We both speak a language which is so similar that we understand each other when we converse, unless indeed we speak French, which one-third of us do. The difference is as profound as this: we are Europeans; you are Americans.

There is a Canadian surgery. For five years we put it to the test on European fields. In virtue of its flexibility it adapted itself to every need. Standard surgery is a civil surgery. It demands a wound made by the surgeon himself, at his own point of election, upon a surface which he prepares, in circumstances which he controls. When it becomes too rigid, it breaks down utterly at the first touch of war. It breaks down equally when surgical aid is demanded by the dweller in the country at the hands of the general practitioner.

Even the standard of measure varies with the thing to be measured. A microscopist uses the micro-millimeter; a land-surveyor uses the link and chain. Our surgeons have surveyed the field of war and the infinitely little field of the laboratory. They have operated in the shining theatre with more than Levitical scrupulosity; they have performed the most delicate and profound surgery in field ambulance and casualty clearing stations, upon trestles in huts or open tents, with only the heat from a brazier and not even running water. Their results were admirable, for all the world to see.

Those surgeons, trained by reality, are to be found in every village in Canada. Their virtue is within them. They bend their means to their needs. They have erected little surgical centres, where the surgery is of the first rate because it is done by a surgeon who is himself of the first rate. Suddenly he discovers that some outside power has decreed that his hospital is only of the third rank, and this decree is published to the world. He then in the public mind has become a third class surgeon. Persons who can afford an operation can afford to travel. They slip across the border, especially in the West, to an "A-hospital." This surgeon, himself, finding his practice destroyed, migrates to an "A-hospital," when he becomes first rate once more, and drives in a closed car.

In the East also, even from Montreal, patients slip quietly across the border for treatment, but for quite a different reason. The American method is one of publicity. We have forgotten the Hippocratic injunction, that things seen and heard at the bedside shall not be disclosed. We have become garrulous; the private concerns of a patient are now a matter of common gossip. A sick person is entitled to his own reticences. If he seeks surgical relief for a trivial ailment, the details are published on the bulletin board of the operating room for all the world to see and hear. A rich man is not now sure that the old confidence of a private consultation will be respected. Even a rich man may have creditors. Next morning his blood pressure, the diagnosis, and prognosis, are discussed in his bank, and by his associates and subordinates who may have designs upon his place. He cannot afford this publicity. He seeks advice where he is protected by the obscurity of a strange place.

Such obscurity will soon be difficult to obtain. Every standard hospital is in the way of being equipped with a machine for recording each stage of the operation, and doubtless a "close-up" of the operator as well. At this moment the main body of the American College of Surgeons is hearing how that may be done from "Will H. Hays," who is described ecstatically as the mogul, the czar, the dynamo of the moving-picture world.

Those little centres had their medical societies, which combined to form district meetings, which by further combination formed provincial societies, and these in turn a Canadian Medical Association. This blow at the small hospital, a blow struck merely on account of its smallness, strikes at the foundation of our whole medical fabric. This is a new reading of the old fable: a well-meaning elephant who assists in the hatching of eggs; in more familiar terms, a vital child overlain by a stupefied nurse.

It has always been in the individual teacher, usually in the small school, in the small hospital, that medicine has sought refuge from the dead hand of a system. Boerhaave in a ward of only twelve beds at Leyden established modern clinical medicine in Europe. In addition, he gave four lectures a day on botany, chemistry, and the institutes of medicine. He was not a specialist. Sydenham was content with the simplest licence to practise; he belonged to no faculty and taught in no school.

It would be easy to imagine your president, W. W. Chipman, taking up his residence in Kentville—an equally famous surgeon has retired to that charming place. According to your method of reasoning he would automatically become lower than a third rate surgeon. Indeed, Clarence Webster, at one time assistant professor of obstetrics in Edinburgh, afterwards professor at McGill, and again in Chicago, had the good sense to retire to Shediac. Your inspectors would be compelled by your own rules to classify him with the local midwife. And if Sydenham came to practise amongst us, he would be refused a licence, although Hippocrates might be admitted to study on the ground that he had a preliminary qualification in Greek. Sir William Osler once congratulated himself on being admitted to Johns Hopkins as a professor. He could never, he said, have gained admittance as a student.

The inherent fallacy in the American method is the assumption that all graduates from certain schools are qualified for the highest posts, and that all graduates from certain other schools are equally disqualified. The relative classification of those schools by the present method of mechanical inspection is, and must be, defective. It is fatal. Therefore, the system must break down. It has broken down. Appraisement there must be, but that appraisement must extend beyond the school to the student, possibly even to the teacher; and it is the student himself who must make that preliminary estimate. In the same school there are students of varying capacity, depending upon their natures, physique, training, breeding, means, and culture. They should be left free, and encouraged to choose the field in which they will practise.

In every school the instruction must be up to the level demanded by the needs of the student who aspires to general practice. If it stops at that the school is a poor school. It must rise to heights which can be reached only by the rarer spirits. That level can be maintained and those heights disclosed by the same teacher in the same lecture—if he is a real teacher. Each student will follow as far as he can, and be stimulated by those who can go the farthest. I pause long enough to repeat a remark of your president,—that every practitioner will confess that he has no aptitude for certain forms of practice, but is never heard to confess that he has no aptitude for teaching.

In England there is one entrance into the general field of practice. From that field various paths ascend, and each path is barred by a rigorous and just examination. Here we hold all graduates of certain schools to be equally qualified. There is no further mark, unless it be the letters F.A.C.S. appended to one's name, but I have not sufficiently investigated the process by which that distinction is achieved.

The most modern scientist, I suppose, will admit that a medical school has something to do with qualifying young men for the practice of medicine. The right of decision has long since been withdrawn from the medical schools. For Canada that right has been conferred upon the Dominion Medical Council. Their examiners are experienced in every department of practice and teaching. From their last report it appears that the largest percentage of graduates considered to be qualified—that is, not a menace to the community—came from the four schools to which first class rank had been denied. The order of merit was in the inverse ratio to the equipment and size of the school.

In this race for magnitude and pomp the hospital, too, is wrested from its foundation, a place where simple charity is dispensed and the recipient properly compelled to bear the stigma of charity. To avoid that stigma is the greatest

incentive to providence, prevision, and self-reliance. The improvident poor and some of the parsimonious rich now demand free hospital treatment as a natural right. The profession is exploited; the stream of charity fails; the poor will suffer; it is the poor who always suffer in the end from new taxes, such as those which are now so glibly demanded for these elaborate hospitals. Those who imagine the "efficiency" of a "standard" hospital have never witnessed the real efficiency of an aid-post, a field ambulance, or a private dispensary.

This is the efficiency prescribed by W. G. M. Byers in his protest (BRITISH MEDICAL JOURNAL, July 1st, 1922), that a graduate must be able to do a certain number of things before he is let loose in the community. His fitness is to be judged by what he can do, not alone by what he can write or say. And he must complete the thing; fifty per cent. is not enough. What those things shall be does not pass the wit of a faculty of practitioners to specify. Beyond this limit, he may do and know as much as he can master. That is medical education.

We have developed a new dogma, *Ex hospitale nulla salus*: no corporeal salvation without the hospital; not even for the parturient woman, who is persuaded that conception is a calamity and parturition a disease. The general practitioner has fallen into desuetude, especially those admirable physicians rationally qualified and trained by experience, whose dispensaries were free to all for a fee that was within the means of every self-respecting person. They detected disease at its very first onset. The patient who has fought his way into the wards is already dead. We have forgotten our humble, though lawful, progenitors, the barber-surgeons.

Last year, in the Montreal General Hospital, the first hospital in America to admit students into the wards, the daily average number of patients was 329; the daily cost of each public patient was 3.68 dollars. If the items of taxes, rent, depreciation, and medical attendance were added, the cost to the community would be ten dollars. To serve these patients and those attending the outdoor department, a medical staff of 160 persons and 175 nurses is required. These public patients paid more than one-third the cost of their maintenance. In the Hôtel-Dieu the cost was less; in the Royal Victoria it was more.

In other days the pride of a hospital was in the number of indigent who were relieved; now the boast is of the amount of money that is extracted from them by a band of paid inquisitors, known as social workers. It does not appear from the last annual report of the Montreal General Hospital what was the daily average of beds occupied by patients from which the hospital received nothing from any source. The number is so small in every hospital that the idea of charity has practically disappeared. And if the claim is made that the hospital is now "run on a business basis," it is fair to remark that a business which expends upon salaries and wages the sum of 205 thousand dollars out of a total "turnover" of 607 thousand dollars, with an operating deficit of 235 thousand dollars, is a badly managed business.

I am not saying that this hospital is unique. It is merely one of those that have been standardized to American methods. There are not enough people in Canada to support this expenditure either by private charity or by public tax. In the United States it may be different—they have sources of revenue denied to us. We must return once more to the simple way of charity unless we are willing to assume these inflated hospitals as once we assumed the equally bankrupt railways.

There is between us a conflict deeper still, the ancient Conflict of Studies. The American method of teaching is the experimental. It assumes that the student can understand nothing he hears with his ears. He must be shown a picture or a thing, as if he were a deaf-mute. I speak with knowledge, for in the past ten years I was present, as a spectator, at four lectures. I shall give a summary of each:

The first was upon the structure of the Universe. The eminent physicist, when he had occasion to mention the term "water," held up a glass. As water is transparent, I was compelled to take his word for it after all. The second lecture was upon "Relativity." When the eminent mathematician had occasion to mention "the man in the railway train," he drew a rectangle on the board with an upright line inside. At the end of an hour he had not come to the explanation, and I went home to read a book for myself. The third lecture was upon "Cults rival to Christianity." The eminent classicist had occasion to mention a place in Persia, but it was beyond the limit of his screen, and he pointed to a spot in the black void. At the fourth lecture the eminent astronomer came provided with the model of a planet, but he neglected to take it out of his pocket.

"Show me, not tell me," is the "slogan" of the experimentalists. This is the old and vulgar demand for a miracle. If students will not hear their prophets, neither will they be persuaded though one rise from the dead. Or, in the more homely words of Isaac Todhunter, from whose books I learned what mathematics I know: "If a student does not believe the statements of his tutor, probably a clergyman of mature knowledge, recognized ability, and blameless character, his suspicion is irrational, and manifests a want of the power of appreciating evidence, a want fatal to his success in that branch of science, which he is supposed to be cultivating." Under this experimental system it is folly to read, an offence to remember.

A real experiment is a valuable product of the human mind, requiring knowledge to invent and ingenuity in performing it. When Augustus Waller demonstrated at McGill for the first time that electrical currents are present in the skin of a dead codfish, he performed an experiment. The thing was done once and for all time. The teacher who repeats the operation before his class is making not an experiment but a repetition of an observation made a thousand times before. It is now pretty well understood that the air exercises pressure. To allow a student to work the handle of the air pump would impress his mind: to watch a professor work it is not so convincing. I doubt the educational value of the performance. The student may take more interest; he would take more interest in football; but the extent of his interest is no true measure of value.

For the true place of experiment let us ask of the mathematicians again. The marvellous power of modern computation depends upon a machine, known as logarithms, invented by Napier in 1614. Four years later, Gunther designed a still more mechanical "line of numbers." Immediately, Oughtred pushed the device to its present point of perfection. It is known as the "slide-rule." Of the machines for avoiding mental labour in computation no other is of equal value. And yet the inventor used it in secret for ten years. When he was finally reproached by a friend and pupil for concealing so useful an invention, he enunciated for all time the true relation between the machine and the mind: "That the true way of Art is not by Instruments but by Demonstration; and that it is a preposterous course of vulgar teachers to begin with Instruments and not with the Sciences, and so instead of Artists to make their Schollers only doers of tricks, and as it were Juglers; to the despising of Art, losse of precious time, and betraying of willing and industrious wits into ignorance and idleness; that the use of instruments is indeed excellent, if a man be an artist; but contemptible being set and opposed to Art. And lastly, that he meant to commend to me the skill of Instruments, but first he would have me well instructed in the Sciences."

The first claim on behalf of routine experiments is that they save labour. The real reason for their employment is that they save thought, and mental exercise is the severest form of work. But the student who has been taught to rely upon experiments alone becomes the practitioner who relies blindly upon instruments. He allows his mind to atrophy, and is helpless without them. He has become a mere mechanic, useless without his tools.

And yet this is the occupation in which students are compelled to spend two precious years in institutes, colleges, and even in some universities, watching routine experiments in physics, chemistry, and biology, performed by young instructors who may be only a little less illiterate than themselves, peering into microscopes, when the large world of nature lies outspread. They would be better occupied

in their own homes in contact with the great minds revealed in books, especially with the great minds of medicine from Hippocrates to Osler.

With this reserve, I am careful to yield full praise to that large chemistry learned from Harrington and Ruttan; pathology from Johnston and Adami; geology from the rocks, and botany from the plants of the field, as taught by Sir William Dawson and Frank Adams, and in Toronto by Sir Daniel Wilson, whose very whiskers suggested the immensity of his theme.

In this audience there are exquisite physicians and masters of surgery; yet I doubt if there is anyone here present, excepting myself, who can write on the board the formula for so simple a substance as phenolglycol; who can say if the sun goes around the earth or the earth goes around the sun; or can explain why the moon varies in appearance on successive nights. Why, then, should students be expected to know so much before they begin the study of medicine?

The next precept is, "Let the student solve his own problems." That was the way of Pasteur and Harvey—too hard a way for all but the chosen few; it means the abdication of the professor. Is teaching, then, of no value? And if a student is to solve his own problems, he can solve them at home without spending seven years in the university.

In the Bulletins of the Association of American Medical Colleges although you will find in them strange forms of expression and, as Maurice Hutton says of Plato, every kind of educational nonsense, you will find also a deep dissatisfaction with the rigid and uniform requirements of the two pre-medical years. They are looked upon as an ordeal, a penance, a penalty, a "barren stretch of wilderness" imposed upon the aspirants to the study of medicine. They are regarded also as "a failure to motivate prospective medical students."

In the Bulletin for July a resolution passed unanimously at the Charleston meeting of 1925 is quoted with approval. According to that resolution, the Association and the State licensing boards are to be asked to permit as an experiment "certain medical schools to modify the curriculum in any way they think desirable, in order to get loose from the bonds which now bind and hamper them." My plea is that Canadian schools be permitted to undertake that experiment. No one knows who it was that constructed this rigid curriculum. No one pretends that it is best for either country. The utmost claim is that it is identical for both. One may say of it, as Henri de Mondeville said of Galen: "I do not suppose God exhausted His power in creating him." The wisest of the Americans are also in revolt. That revolt began with us. My desire is to give to it direction and force.

Pushed to a conclusion, the advocates of the experimental method would content themselves by pointing out the professors and assigning their names as they walked in the university grounds. The experimental method may save mental labour. That is not the end of education. To a stupid person an experiment is as senseless as a lecture or a book.

These various American foundations, colleges, and associations by their very ruthlessness performed a task of incalculable good in their own country. They destroyed the mercenary schools and many other evils that were disclosed in the survey of twenty years ago. It is for them to decide when their work is done. It may well be that the time has come for them to take off their whips and restore freedom to the universities. In Canada, too, their operation has been of some advantage. They aroused us from our complacency; but the time is surely come when we must be left free to build according to our own needs.

Canadian medical schools suffer in turn from the various provincial boards. Their rules and regulations are nearly identical in respect of time and course of study. They imitate and copy one another until they have produced a mass of legislation in which no one believes, which not one approves. By a process of evolution and accretion they have created a fossil, which might be correctly labelled unreasoning, arbitrary, ultimate. And that is the dead hand under which the medical school and the medical student lie. This rigid curriculum is the death warrant for any vital aspiration in the medical student or teacher. It emerged from the chaos of the scientific mind.

The origin of evil has always been a perplexing problem. The first instinct is to assign it a place without one's own borders. After yielding full credit to the United States as a possible nidus, let us inquire in how far it has arisen *de novo* amongst ourselves, or is the result of a universal cause. Let us begin with the valid experience that all practice has its origin in a pre-existing theory.

The theory of the macrocosm and microcosm devised by the Greeks, developed by the Arabians, and reaffirmed by Dante, was the central dogma of medicine so long as Graeco-Arabist influence prevailed. Even Darwin, when he attempted to assign a general term to the human body, could find no better term than "microcosm." The Arabist treatment of wounds by sanative compounds and coctions survived all the masters of surgery, Bruno, Hugh of Lucca, Theoderic, Henry of Mondeville, even Paré himself, and finally came to an end in the practice of Lister.

Parallel with this, from an even greater antiquity, ran the doctrine of the four elements, each composed of four primary qualities which had their corresponding qualities in the humours of the microcosm. Medical study then became an affair of rhetoric, metaphysics, logic, sophistry, and astrology. Even Vesalius could not free himself from those influences. He failed to discover the Galenical vessels between the ventricles of the heart. He was not bold enough to deny their existence; he described them as "invisible." Harvey made no such compromise. He followed where sound argument and ocular demonstration led.

In much more modern times, alternative and equally binding doctrines came into force. Governed by Newton's laws, a new Universe was constructed, like a model in the patent office or a glorified United States. Man himself becomes an automaton, or at best an internal combustion engine run by compressed animal spirits. This Cartesian man was too simple. With the new chemistry a chemical man was created, approaching very close to the modern conception of "a phenotype, gradually developed from the protozoon by mutation of ids and gens," but still composed of salts dissolved in water. One who now aspires to write on medicine must learn the jargon in which medicine is written.

By the premature application of such partial principles a new and scientific medicine is always built up; but medicine, just as it is at the point of becoming scientific, falls into ruin. On one occasion, Sydenham's was the hand that cast it down: "You cannot imagine how far a little observation carefully made by a man not tied up to the four humours, or sal, sulphur, and mercury, or to acid and alkali, will carry a man in the curing of disease." Sydenham began where Hippocrates stopped. He was not a scientist. He was a physician. The one is the antithesis of the other. He abandoned hypothesis. He was less concerned with explanations than with facts that arose from actual observation of the processes in health and disease.

Once more, and in our own time, the teaching of medicine has fallen into the hands of the scientists, who are so dominated by the doctrine of evolution that they have little thought for the thing that has been evolved, and less still for the process of devolution which is known to physicians as disease. In their own sphere they have attained neither to fixity of principle nor to permanence of indecision. They vacillate from moment to moment like a cow walking. They cannot teach, because their boast is that they do not know, that they are still learning. Their aim is to convert their students into agnostics like themselves. These are they who construct the curriculum for medical schools. Their mind is one. The result is the same. That is the ultimate origin of the evil. The laboratory is their temple, and those who sit in the temple soon come to show themselves as gods.

In our own time, happily, teachers and practitioners have arisen who were strong enough to break those bonds, and bend the sciences to their needs. They did not disdain tradition and learning like Paracelsus, who began his career by burning his books and declaring that Galen was less to him than his shoe-buckles. Sir William Osler as a teacher,

and Sir James Mackenzie as a practitioner, will serve as examples of this new courage. Mackenzie, like Sydenham, fell back upon unaided observation, and disclosed heart disease in the strong light of experience. Nor did his courage go unrewarded. After twenty years of Burnley porridge, he eat turtle at the Athenaeum; claret crowned his cup in Harley Street; he himself had fished the murex up.

Looking more closely at the problem, the evil lies within our own Faculties. The scientist has gained too much control. In the intervals between the repetition of experiments, made by original investigators, to prove what every one knows, he has ample leisure to enforce his methods upon medical teaching. The physician is preoccupied with the sick and dying. The surgeon is devoted to his technique, and in the work of his hands forgets to employ his mind. Both are inarticulate. They allow the scientists of the laboratory and of the clinic to dominate the course, and the student falls into the gulf that lies between science and practice. In lucid moments the laboratory mind is assailed by doubt of the possibility or wisdom of attempting to convert the medical student into an abstract scientist. It then falls back upon the "cultural value" of the process, but further doubt must be created by personal introspection into the recesses of that mind itself. Life is too short, the Art too long. The student is wasting his time upon preliminary sciences, as a carpenter would be wasting his time upon the botany of the wood he employs, as a chemist or a physicist might be wasting his upon the further antecedent sciences of alchemy and astrology.

The theme of the present thesis is a plea that the power of these associations, boards, faculties, laboratories, and elective colleges be broken; that freedom of teaching be restored to the universities and to teachers who have the precious gift of teaching; that the present curriculum be examined with that freshness of mind which, according to the scientists themselves, should be applied to all sacred writings. This is merely their own plea for experience in the face of authority.

But the authority of these various provincial boards is already shaken from within. The Canada Medical Act permits the provincial boards to dispense with examinations. One province, British Columbia, has eliminated the local board, and depends upon the Dominion Council. Another province, without any formal self-denying ordinance, but unselfishly and for the general good, is sending medical graduates in increasing numbers direct to the Dominion Council for licence to practise. That body is growing in favour by reason of its professional strength and freedom from technical influences. It is a new creation; it is not entrenched; it is close to the wide scrutiny of Parliament, which has never been impressed by pedagogic assumptions. This Council may in time become an instrument of freedom to the universities.

The warning of my old master was: "Hesitate before you begin an operation; once you have begun you must not stay your hand." I am nearly done. You have borne in patience, without the anaesthesia of flattery. All nations are admirable in their own environment; they develop ideals and create methods which are inevitable for themselves alone. Their culture is powerful only so long as it remains free to the world. The attempt to enforce that culture, those ideals, those methods over their own borders creates hostility, always ends in disaster to themselves, and frequently in disaster to their neighbours. That was the fatal error into which the Germans fell—a lack of sensibility to the feelings, emotions, beliefs, and prejudices of other peoples—they themselves being like you, so naive, so amiable, so ingenuous, so convinced, and sincere.

Respect for boundaries, national, physical, social, and intellectual, is the prime condition of peace between friends, families, and nations. The more closely these units are related the more scrupulously must that respect be observed. Therefore, I beseech you, do not press upon us too closely American methods in our medical education.

And yet, it does so often happen that the evil we deplore never comes to pass. Nothing is so bad—or so good—as we expect. A pine tree does not grow up to the sky, nor a man's whiskers to the ground. Your president this year is a Canadian. Since I came into this room, I am informed that your president-elect is George Stewart, a Canadian too—that is, if for the purpose of my theme, and following immemorial usage, I may ascribe the glory of the Maritime Provinces to Canada at large. It may therefore be that after all nothing will happen; or, indeed, that we shall persuade and enable you to accept not our methods but those ideals which we have inherited.

The Profession of Medicine.

INTRODUCTORY.

THE main object of this Educational Number of the BRITISH MEDICAL JOURNAL is to be of assistance to prospective students and their parents. It is largely a guide to the steps that must be taken and the studies that must be pursued in order to become a registered medical practitioner. It contains also a section on post-graduate medical teaching in Great Britain, and other sections addressed more particularly to those who have just qualified and are considering what path in medicine they should follow. The details given are founded for the most part on official information, and are arranged along the customary lines. As in past years, we take occasion in this introductory article to review some aspects of medical study and practice to-day, in order to put the situation before those who think of devoting themselves to medicine, and thus help them to gauge their fitness for the calling and the prospects it holds out.

Our opening article this year is an address on American methods of medical education, delivered in Montreal last autumn by Sir ANDREW MACPHAIL, Professor of the History of Medicine in McGill University. While his outspoken criticisms apply for the most part to conditions in Canada and the United States, much of what he says has to do with medical education everywhere, and his words can hardly fail to stimulate thought among the wider audience to whom we now present them. His thesis, in effect, is a plea for greater freedom in teaching, and for a thorough re-examination of the curriculum in the light of modern requirements and ideas. The problems of medical education are not quite the same on each side of the Atlantic; but it may be that we, too, would be the better for a few home truths about the "dead hand," and need a warning against "efficiency" and "standardization" when these are imposed upon a country from outside.

The intending student will find in subsequent pages an account of the course of training required of him, the places where it can be obtained, and the universities and other licensing bodies which test the knowledge gained and confer degrees or diplomas entitling successful candidates to become legally qualified medical practitioners.

THE GROUNDWORK OF MEDICAL STUDY.

"Three principles of all professional education seem to be fundamental," wrote Sir Clifford Allbutt[1]: "First to secure a good general education; secondly, a good scientific education; thirdly, a good technical education." Upon the first of these the second and third largely depend. As for the second, no one can overstress the value to a doctor of a thorough grounding in the basic principles of science, for medicine is an art founded on science. The temptation to take short views and short cuts is very

[1] The Training of the Medical Student. BRITISH MEDICAL JOURNAL, September 2nd, 1922, p. 407.

strong in the early years of the medical curriculum, but no greater mistake can be made than to work at any branch of preliminary study as though it were something to be thrown aside and forgotten when the examination immediately ahead has been passed. The student of good intelligence who makes it his aim to grasp the principles of each of the fundamental sciences need have little dread of examiners. In mastering the principles he will find that the larger details take on new meanings and a new interest, and so are fixed in his memory. Moreover, the preliminary sciences give a drilling in exact methods, in precise manipulations, and in vigorous reasoning, which will bear immediate fruit in the later clinical part of the curriculum, and prove of lasting benefit throughout professional life. The purpose of medical education is to build up on scientific principles a solid structure of practical knowledge. Students who keep this in mind will look upon "cram work" as a weakness in the foundations, and therefore as a hidden danger to the superstructure. The great anatomist John Hunter, as Sir Arthur Keith reminded us in last year's Educational Number, "studied anatomy and physiology to get help in diagnosing and treating his patients. He studied dead things to understand the living, and observed living things to understand the dead. . . . A knowledge of how this body is made and how it works must provide the basis for all the more practical subjects of medicine."

Portals of the Profession.

The goal of every student is the entry of his name in the *Medical Register*, which is the official statutory list of qualified medical practitioners kept by the General Medical Council. Those who are not familiar with the system of medical teaching and examination in these islands, and with the history of our professional institutions, may feel bewildered at first sight by the number and variety of ways in which admission may be obtained to the *Register*. They will see in the table of contents to this Educational Number that there are twenty-seven bodies—eighteen universities and nine corporations—which either separately or jointly issue registrable qualifications; and the number of teaching institutions is even larger. Nevertheless, although we have no single State examination in medicine —no "one portal," as it has been termed—the medical courses of the various universities and schools in Great Britain and Ireland run on parallel lines, and the obligatory curriculum is much the same for all students. As, however, the individual teaching and examining bodies have different standards and requirements, the choice should be made early, so that a definite plan may be followed. It is therefore important to gain some idea of the value, in different walks of medical life, of the various degrees and diplomas, and of the comparative difficulties they present.

All who wish to enter the profession must comply with certain conditions. These are regulated by the General Medical Council, which is a statutory body set up under the Medical Acts; a summary of its requirements is given at page 386. Many changes have lately been made in the medical and pre-medical curriculum, and this section, as well as the article on Professional Study and Examination, should be studied with care. It is the business of the General Medical Council, so far as possible, to see that a suitable kind of training and the requisite degree of knowledge are secured to the student, and it is the business of the medical schools and examining bodies to give the training and test the knowledge in accordance with the requirements of that Council. Every student, after passing examinations in the subjects of general education and in the preliminary sciences, must take a course of training at a recognized medical school, covering a period of at least five years, but usually extended to six years or more. Examination of candidates as to their fitness to practise medicine, surgery, and obstetrics is left to the licensing bodies, which are of two kinds—the universities, and certain medical corporations in England, Scotland, and Ireland. The requirements of these licensing bodies are summarized elsewhere under separate headings. One of the functions of the General Medical Council, besides that of keeping the *Medical Register* and maintaining discipline within the profession, is to make sure that the tests at each stage do not fall below a certain standard, and that the students examined have undergone prescribed courses at approved institutions. Successful candidates eventually receive either degrees, in the case of a university, or diplomas or licences, in the case of a corporation; these qualifications entitle them to claim insertion of their names in the *Medical Register*. Every student, as soon as he obtains his qualification to practise, should at once register; otherwise he cannot hold a public medical appointment, or sign any certificate required from a legally qualified practitioner (such as a death certificate), or recover professional fees in a court of law.

Holders of diplomas and licences once made up the great majority of all medical men, especially in England and Wales. But universities have greatly multiplied, and so many practitioners are now graduates in medicine that a student at the threshold of his career will do well to aim at a degree, though it may be desirable to take also a diploma or licence. The medical degrees (M.B., M.D., etc.) granted by the universities in Great Britain and Ireland are mentioned among the particulars relating to each university printed elsewhere in this issue.

Cost of Medical Education.

The first thing to be said under this heading is that the cost of a medical education varies within wide limits. Besides differences in the charges made for instruction, there are differences in examination fees, as well as in the fees for certificates of qualification, and those who seek the higher degrees and diplomas must expect to pay more for the additional courses and tests and certificates. Again, not all students, however industrious, have the knack of imparting what they know to an examiner, and every setback due to failure in the examination room or to illness means added expense. School and examination fees, together with the cost of board, lodging, clothes, and recreation, form the largest items of expenditure, and to these must be added the money spent on books, microscope, instruments, and so forth. Since professional education must in any case continue for five years at least (a period exceeded by the vast majority), and since the cost of living in different parts of the country varies much, while personal expenditure varies still more, it can only be said in a general way that anyone who thinks of entering the profession should be prepared for an outlay of at least £1,500. Something between two-thirds and three-quarters of the whole amount would probably be spent on maintenance, and the rest in fees, etc., for tuition and examination. On the other hand, more scholarships and money prizes are offered now than in the past; at the Scottish universities bursaries are numerous; and the Carnegie Trust (whose regulations are summarized at page 397) gives financial help to many Scottish students. The main thing to bear in mind is that, as compared with other professions, the period of training in medicine is long, and for most students costly. Further guidance on this matter will be found in the recently issued memorandum,[1] drawn up by the Registrar of the General Medical Council, on the procedure to be followed in order

[1] *Memorandum on the Procedure to be Adopted by those who desire to enter the Profession of Medicine, with Notes on Costs and Prospects.* 1927. General Medical Council, 44, Hallam Street, Portland Place, W.1. Price 1s. post free.

to enter the profession. This pamphlet gives much useful information, concisely arranged, including a comparative table of the cost of study and examination at the various institutions.

Medical students are not commonly the sons or daughters of wealthy parents; very often their education puts a heavy strain on a slender family purse. Hence, before setting out upon this long and exacting course of study, it is usual to weigh, not only the cost, but also the prospects. An overcrowded curriculum would be hard to face if all that could be discerned at the end of it were an overcrowded profession. Without forgetting the adage, "there is always room at the top," the youth and the girl of to-day, when reckoning up their chances in any calling, will wish to know the probable numbers of their competitors for the work that is waiting to be done.

THE NUMBERS OF MEDICAL STUDENTS.

One effect of the war was a great increase in the number of medical students, both men and women, but especially women. The climax was reached immediately after the Armistice. The following brief survey of the position should be read in conjunction with the note and tables printed at page 385 on the numbers of registered practitioners. More new students mean more new doctors five or six years later.

In the thirteen years before the war the annual entry of medical students in Great Britain and Ireland averaged about 1,400; during the war period, although many left to serve with the forces, the whole number studying in the schools grew steadily larger. In 1914 the entries rose to 1,600, and in 1915 to 1,918; in 1916 they were 1,875; in 1917 they rose again to 2,150, and in 1918 to 2,253; and in the following year, when demobilization was in active progress, as many as 3,420 new students were registered. After 1919 the number of entries rapidly fell. They were 2,531 in 1920, 1,808 in 1921, and 1,333 in 1922. In 1923 the entries dropped to 545, and the reasons were discussed by Sir Donald MacAlister in his presidential addresses to the General Medical Council. He suggested that the sudden falling off was more apparent than real, and attributed it to the introduction of a pre-registration test in elementary physics and chemistry. This has been borne out by the figures for the three following years. In 1924 the entries were 1,043; in 1925 they were 1,070; and in 1926 they rose to 1,260.

The recent decline is an advantage, because excessive entries of students, if they go on long enough, lead to overstocking of the profession. In the past five years the numbers of new practitioners have greatly exceeded the usual pre-war figure of eleven hundred or so. Registrations in 1922 numbered 1,983; they rose to 2,482 in 1923, and to 2,796 in 1924; in 1925 they were 2,570, and last year 2,120. The large additions to the profession in recent years brought the total number of names in the *Medical Register* up to 52,614 at the end of 1926. This is ten thousand more than the figure for 1914, and the ratio of doctors to population is now considerably higher than at any previous time. It is true that the scope of medical practice has widened, and fresh openings for professional work have appeared; but there must be limits to the demand, and the supply of new practitioners ought not to outstrip the medical needs of the community. The new regulations of the General Medical Council, which came into force in 1923, were drawn up for another purpose, but they should incidentally do something to keep the entries of students—and, as a result, the numbers of the profession—within manageable bounds. On the whole, it may be said that, for those of good average intelligence who are not afraid of work, the prospect in medicine to-day is quite favourable.

CHOICE OF A CAREER IN MEDICINE.

The student, having passed all his tests and placed his name on the *Medical Register*, becomes a member of the profession and assumes the privileges and responsibilities that go with legal qualification. But the final examination is only the gateway into a wider field of training and experience. Education must continue throughout his career; a good doctor remains always a student. As an introduction to practice of whatever kind, nothing is so useful as a year or more spent in junior hospital appointments; and all who can afford the time should look upon the holding of such posts as a most profitable investment. If his mind has not been made up already the young practitioner has now to consider in which branch of the profession he can best exercise his abilities. The choice is very wide. Among the great variety of paths open to men of different tastes and talents are general practice in town or country; Government service at home or abroad, including, of course, the medical branches of the Navy and Army and Air Force, and the I.M.S.; public health appointments and other administrative or official posts; institutional work, such as that of the asylum service; and special work in scientific research and teaching, or in one of the many subdivisions of clinical medicine and surgery. Most of these careers are discussed in some detail in the later sections of our present issue, but a few words may be said here about general practice and the work of a consultant or specialist.

Useful information and advice on such matters will be found in the *Handbook for Recently Qualified Medical Practitioners*, published by the British Medical Association.[1] This comprises articles on the main openings for members of the profession; on some practical aspects of medical work, especially the legal and ethical aspects; on registration and the privileges of practitioners; on medical work under the National Insurance Acts; on post-graduation study and special diplomas; on specialization and consulting practice; on the fellowships, scholarships, studentships, prizes, and research grants open to students and practitioners; and on the important subject of individual medical defence. The section on practical aspects of medical work, specially prepared for the second edition, will be found of much value to all members of the profession. It embodies a great deal of advice on professional conduct in general; on medico-legal difficulties of common occurrence; and on the relations between doctor and patient and one doctor and another.

GENERAL MEDICAL PRACTICE.

This field of medical work has hitherto been, and still is, the destination of the great bulk of students—perhaps as many as 75 per cent. The life is onerous and the pay too often inadequate; but there are compensations, and many of the very best students—men of broad humanity with high intellectual gifts—choose family practice as their career. Their work is of the utmost value to the public and the profession, because it sets a standard for the branch of medicine in which the generality of students sooner or later become absorbed.

General practice is usually entered upon in one of three ways. The newcomer may take a house and wait for work to come to him; he may purchase the goodwill of a practice rendered vacant by retirement or death; or he may become a partner in an established firm. The first is more risky than the second, and the second than the third. A well managed partnership of three or more has this advantage over single-handed practice, that it allows each partner leisure for recreation and for keeping up with the progress

[1] *Handbook for Recently Qualified Medical Practitioners.* 1926. British Medical Association, Tavistock Square, W.C.1. (3s. 6d. net; post free 3s. 9d.)

of medicine. Success in private practice demands a great deal of knowledge other than that gained at the medical schools, and hence a man is more likely to be accepted as a partner, or to do well on his own account, if he has already some experience as an assistant or deputy. A considerable proportion of general practitioners, therefore, begin their work as assistants, and of these there are few who afterwards find cause to regret the time spent in learning the ropes under the eye of an experienced senior. As the conditions of general practice vary much in different parts of the country, and even in the same district, it is usually best to undergo this "post-graduate apprenticeship" in circumstances resembling those to be encountered later.

An all-round knowledge of practical medicine, surgery, and obstetrics should, if possible, be supplemented by skill in some particular branch of work. Moreover, what has been said about the advantage of having held one or more resident hospital posts applies with special force to general practice, for those who have been thus trained acquire a confidence and an experience not easily to be obtained elsewhere. The value of house appointments has been well put by Mr. E. B. Turner in an address to senior students and new graduates,[1] which contained many hints and cautions about private practice and the work of the family physician.

The fundamental importance of the work done by the general practitioner is better appreciated now than in the past, and it is more fully recognized that an efficient medical service for the community must be based upon the skill and devotion of the family medical attendant, working in close touch with the aims and methods of preventive medicine. Private practitioners to-day take a wider view of their duty towards the environment and the habits of their patients. The centre of gravity is shifting away from disease and towards health. The doctor of the future will come more and more to study early disturbances of function—the threshold of disease—and the maintenance of bodily and mental health.

While this is all to the good, it cannot be denied that insidious inroads on private medical practice are continually being made under the auspices of the State and of voluntary bodies. This, speaking generally, is not only against the interests of individual members of the medical profession, but, in the long run, against the public interest too. Furthermore, increasing contact with public authorities brings with it new and often irksome demands, and the multiplication of official requirements and administrative checks has a tendency to cramp the doctor's independence of action. The national insurance system, now more than fifteen years old, has already had a profound influence upon private medical practice. The Insurance Medical Service now comprises more than 14,000 doctors, some doing much work among insured persons, others little. In so far as they undertake these duties they are in effect part-time civil servants. But while the freedom and the individualism of the doctor have been restricted by the Insurance Acts and Regulations, there is a general belief (borne out by the findings of the recent Royal Commission) that the panel system has provided a better service than existed under the old "club" arrangements, though it is by no means as complete or as effective as it might be made. Some of its worst faults have been removed through the efforts of the Insurance Acts Committee of the British Medical Association, which represents the interests of insurance practitioners in all negotiations with the Government.

One further remark should be made before leaving this subject. The strain of busy general practice is so heavy and often so continuous that only men and women of sound physique can expect to last the course. Everything, therefore, should be done to promote bodily and mental fitness when work is slack, and Mr. Turner's advice on the cultivation of outdoor sport and hobbies is very much to the point. Night duty, irregular meals, and long winter drives during epidemics will tax the strength of the strongest. One of the drawbacks of a single-handed practitioner's life is that, failing some arrangement with a neighbouring colleague, he is on duty twenty-four hours a day and seven days a week, and must be ready to answer a call as soon as it comes and however unfit for a fresh task he may feel.

[1] Practice and Some Types of Patients. BRITISH MEDICAL JOURNAL SUPPLEMENT, February 26th, 1927, p. 65.

CONSULTANTS AND SPECIALISTS.

Where specialism begins and consulting practice ends would be hard to define; but the latter term may be said to cover in ordinary usage the work of the general medical consultant or "pure physician," and that of the general surgical consultant or operating surgeon. Most general consultants, whether medical or surgical, are specialists in some branch of their practice, and most, if not all, specialists are consultants in the sense that their work largely comes to them through the recommendation of other practitioners, with whom they act (or should act) in a consultative capacity. In any case, whoever holds himself out as one or the other or both must be assumed to have knowledge and skill above the ordinary.

To be a competent specialist, as Mr. Turner says, a man should have a comprehensive knowledge both of medicine and surgery, and if possible should practise some years before starting on his own line of work. Intensive study is required of those who aim at becoming consultants or specialists, and they should look upon hospital posts, especially where there are students to be taught, as a vital part of their own higher education. They must recognize, too, that for them, as for practitioners of all branches, success will depend in the long run, not only upon mental gifts, special experience, and capacity for hard work, but on the possession of those qualities which inspire confidence both in patients and in colleagues. In the practice of medicine personal tact and character are as important as scientific equipment. Moreover, since the consultant or the specialist can scarcely hope at first to pay his way by consulting work or by the exercise of his specialty, he must either have the means to support himself for an uncertain period, or be prepared, by teaching or in other ways, to make ends meet. If while in preparation for his life work he can undertake some piece of research bearing upon his clinical studies, this is strongly to be recommended.

Additional degrees and diplomas are important factors in securing election to the visiting staff of a hospital, and a few generalizations about them may be made here. Beyond the qualifications, such as Bachelor or Licentiate, which admit to the *Medical Register*, most of the licensing bodies bestow higher titles, such as Doctor, Master, or Fellow, after further tests. A considerable number of those who have graduated M.B., including many general practitioners, proceed later to the doctorate, and the possession of an M.D. degree is certainly advantageous to anyone in consulting medical practice. When applying for the post of physician to a hospital it is always useful, and may be obligatory, to hold also the Membership of one of the three Royal Colleges of Physicians, according to the part of the British Isles in which the hospital is situated. So, too, the Fellowship of one of the three Royal Colleges of Surgeons should be obtained by those seeking surgical appointments, and the degree of Master of Surgery is an added distinction. There are also diplomas in a growing number of special branches of work—public health, tropical medicine, ophthalmology, laryngology, radiology, tuberculosis, and psychological medicine—which are superfluous for most practitioners, but useful or even indispensable for those who

intend to devote themselves to one or other of these subjects. Information about the several diplomas open to qualified practitioners, and about higher degrees, will be found elsewhere in this issue.

FINANCIAL AND SOCIAL CONSIDERATIONS.

It is no easier now than in the past to assess the attractions of medicine as a means of livelihood. On the financial aspect of our profession two or three remarks only need be made, and those of the nature of truisms. Medicine is not to be regarded as a path to fortune, and anyone who enters it with the sole idea of making money has mistaken his calling. The competent practitioner can always make a living; but the main reward of the medical life is the knowledge of good work well done. Whatever the branch of medical work chosen, there are few doctors who become what a business man would consider even moderately rich by the practice of their profession. In this centenary year of Lord Lister's birth some words he addressed to new graduates in 1878 may well be quoted: "If we had nothing" (he said) "but pecuniary rewards and worldly honours to look to, our profession would not be one to be desired. But in its practice you will find it to be attended with peculiar privileges; second to none in intense interest and pure pleasures."

If medicine, from the financial point of view, offers to the majority little more than the means of livelihood, in its social and intellectual aspects the prospect is far brighter. The culture which once belonged to the physician alone has spread into all ranks of the profession. The great improvement in the education, general as well as technical, of the practitioner has added much to his influence with the public, and has been a large factor in raising his social status during the sixty-nine years that have passed since the General Medical Council was constituted under the first Medical Act. A family doctor of the kind that is well styled "the backbone of the profession" occupies an excellent position among his neighbours, and is the friend and confidant as well as the medical adviser of many of his patients. Many men go further, and take a leading part in the public life of their district. How much good work of this kind can be accomplished during a long and arduous professional career may be found at the close of an interesting article published in these columns eight months ago.[1]

PROFESSIONAL ORGANIZATION.

The spirit of comradeship, which adds so much to the value and happiness of undergraduate medical study, is at least as great a boon to the qualified practitioner. It should be preserved, both for its own sake and because in these days no doctor, whatever his position or the nature of his work, can safely stand aside from his fellows. Individuals and isolated bodies of practitioners are always handicapped when they attempt to defend their own interests, unsupported by their fellows, against organized bodies, whether these are Government departments, local authorities, or bodies of workmen. While in ordinary circumstances the individual doctor is quite able to deal with the individual patient and the patient's friends, he cannot hope to engage successfully in single combat with outside organizations.

Medical men and women must, therefore, band themselves together for their common protection, and the first step after registration should be to become an active member of the British Medical Association. Besides having behind him the machinery and the influence of a world-wide professional body, a young practitioner will find in the meetings of his local Division, and in the Annual Meetings of the Association, held in large medical centres, many opportunities of keeping up with the progress of medicine and of friendly intercourse with colleagues. One other thing that no graduate should fail to do is to join immediately one of the professional societies which for a small yearly sum undertake individual legal defence of their members.

The British Medical Association was founded in 1832 to promote the medical sciences and to maintain the honour and interests of the profession. A brief note on its constitution and activities will be found at page 437. The Association, with Branches throughout the British Empire and a membership of more than 33,000, is the only body that can act for the profession as a whole and speak in its name. The record of ninety-five years' work shows that professional organization, wisely governed, can combine service for its members with service for the public. Much remains to be done in each direction, and the rising generation of doctors must not merely consolidate the ground won, but press forward. Every medical man and woman should cultivate a wide interest in the welfare of our profession, and try to take some share in the various movements, scientific or social or political, with which the Association has identified itself.

[1] Arthur C. J. Wilson: Fifty Years in a Moorland Practice. BRITISH MEDICAL JOURNAL, January 1st, 1927, p. 30.

PROFESSIONAL STUDY AND EXAMINATION.

A NOTE ON THE REVISED SCHEME.

IN the year 1922 the General Medical Council prescribed a readjustment of the medical curriculum, to come into force at the beginning of the following year. In this readjustment, among other things, increased emphasis was placed upon sufficient opportunity being afforded for the study, both theoretical and clinical, of those subjects which are now so essential in connexion with the treatment centres of a local authority, such as ophthalmology, venereal diseases, orthopaedics and mechano-therapeutics, infectious fevers, anaesthetics, ante-natal conditions, and infant welfare. In the article at page 386 on the functions and requirements of the General Medical Council there will be found an account of the resolutions and recommendations of the Council which have applied since the beginning of 1923. We summarize below the leading features of the revised scheme of professional study and examination, and indicate the importance attached by the Council to the preventive aspects of medicine. It must be remembered that no qualifying examination based upon this readjusted curriculum can take place until next year. Time has now been given for the universities, schools, and examining bodies to adjust themselves to these requirements, and we understand that an inquiry by the General Medical Council as to how far this has been done is now completed. It is expected that the results of this inquiry will be made public either in November next or early next year.

The Revised Curriculum.

The minimum age for registration as a medical student is now 17 years. Formally, the length of the medical curriculum is not added to; practically it is, by transferring to preliminary study and examination the subjects of elementary physics and chemistry in their purely scientific aspects. In the applications to the professional courses—as in biophysics, biochemistry, and pharmacological chemistry, appropriate instruction is to continue throughout the curriculum, and is to be tested by examination, so that the student shall no longer be able to put behind him as past and done with the knowledge which he acquired as a preliminary. If he has had no facilities at a secondary school or otherwise for obtaining what is necessary for the preliminary examination in these subjects, then he can come for it to the university or college, but study there will not count for the medical curriculum. In biology comparatively few secondary schools are equipped for elementary tuition, but the Council has suggested an arrangement for utilizing the work of such schools as are qualified for the purpose. The examination will not be "pre-curriculum," but the instruction may be so, and a

licensing body can allow students who so desire to sit for the examination immediately after matriculation. Here again, however, the applications of biology to medicine, surgery, and midwifery will continue to receive attention throughout the courses.

Besides the resolutions of the General Medical Council in regard to professional education and examination printed elsewhere, a series of additional resolutions was adopted in 1922, as follows:

(*a*) That throughout the whole period of study the attention of the student should be directed by his teachers to the importance of the preventive aspects of medicine;

(*b*) That each Licensing Body should make adequate arrangements for the effective correlation of the several subjects of study throughout its curriculum;

(*c*) That the teaching of anatomy and physiology should include as a regular part of the courses the demonstration on the living human body of structure and function;

(*d*) That the curriculum should be so arranged that a minimum period of three years shall in every case be available for study after the completion by the student of the Professional Examinations in Anatomy and Physiology held at the close of the second year;

(*e*) That the curriculum should be so framed as to afford sufficient opportunities for the study, during the last three years of the course, of Physics, Chemistry, Biology, Anatomy, and Physiology in their practical application to Medicine, Surgery, and Midwifery, and that the student's knowledge of these applications should be subject to test in the Final Examination;

(*f*) That before the student is admitted to his clinical appointments he should have received practical instruction in clinical methods and in the recognition and interpretation of physical signs;

(*g*) That instruction should be given, in the courses of Forensic Medicine and Public Health or otherwise, on the duties which devolve upon practitioners in their relation to the State, and on the generally recognized rules of medical ethics. Attention should be called to all *Notices* on these subjects issued by the General Medical Council.

The Council, it will be noted, attaches great importance to the reservation of sufficient time for the later subjects of study, free from all worries about passing the examinations of the earlier parts. To that end it recommends what is practically a block system. A minimum of three years should be available, not merely after the courses of anatomy and physiology have been taken, but after the examinations in these subjects have been passed.

Examination Reform.

Another notable feature is that in assessing marks in the several examinations account may be taken of "duly attested records of the work done by the candidate throughout his course of study" in the subject. This is an effort to meet the long felt difficulty that a man's mental agility, or the want of it, counts far too much in the examination room. The difficulty is real, but the remedy is not easy, and the Council has been wise in the cautious approach it makes towards a solution. Where, as in the examinations for the various conjoint diplomas, a student will only by chance come before his own teacher as an examiner, absolute impartiality in the attested records will be necessary. On the other hand, at the universities, where the teacher is almost always one of the examiners, no personal like or dislike of a student must influence the report of the internal to the external examiner. The class records should, of course, be available, but the scheme will put a serious ethical obligation on all concerned, and the Council will doubtless watch its operation with keen and critical interest.

Training in Preventive Medicine.

The first of the resolutions quoted above should be borne in mind by every teacher throughout the whole curriculum, and not merely in the clinical subjects. All the earlier subjects—physics, chemistry, biology, physiology, anatomy, and, of course, pathology, bacteriology, and therapeutics also—afford opportunities from the very beginning for instilling into the mind of the student the necessity for his keeping constantly in view, in all the advice and treatment he may give throughout his professional life, the primary importance of promoting the general health of those who entrust themselves to his care, and of preventing trivial ailments from developing into definite disease.

THE NUMBERS OF THE MEDICAL PROFESSION.

A Review of Fifty Years.

Since the year 1876 the General Medical Council has kept an analytical record of the number of names entered in, added to, or removed from the *Medical Register* in each twelve months. The *Medical Register* has been published annually since the Council was constituted under the first Medical Act of 1858; but before 1876 no such data as these were ascertained or preserved.

In order to gain a general view of the numerical strength of the medical profession during the past fifty years we have extracted from the tables and set down below in parallel columns the total number of names in the *Medical Register* on December 31st of each year, and the numbers added annually by registration between 1877 and 1926.

Numerical State of the "Medical Register."

Year.	Names added in Year.	Total No. on Dec. 31.	Year.	Names added in Year.	Total No. on Dec. 31.
1877	940	22,841	1902	1,275	37,232
1878	996	22,600	1903	1,233	37,878
1879	996	22,516	1904	1,168	38,492
1880	1,123	22,936	1905	1,240	39,060
1881	1,053	23,275	1906	1,197	39,529
1882	1,171	23,801	1907	1,221	39,827
1883	1,304	24,517	1908	1,137	40,257
1884	1,388	25,321	1909	1,143	39,818
1885	1,377	25,998	1910	1,062	40,483
1886	1,431	26,452	1911	1,042	40,913
1887	1,531	27,246	1912	1,157	41,439
1888	1,184	27,939	1913	1,168	41,940
1889	1,305	28,348	1914	1,433	42,378
1890	1,266	29,163	1915	1,526	43,225
1891	1,345	29,555	1916	1,202	43,481
1892	1,513	30,590	1917	1,134	43,819
1893	1,579	31,644	1918	1,077	43,926
1894	1,426	32,637	1919	1,322	44,510
1895	1,446	33,601	1920	1,457	44,761
1896	1,385	34,478	1921	1,760	45,408
1897	1,230	34,642	1922	1,983	46,476
1898	1,210	35,057	1923	2,482	48,140
1899	1,351	35,836	1924	2,796	50,035
1900	1,345	36,355	1925	2,570	51,738
1901	1,318	36,912	1926	2,120	52,614

The following table indicates the varying proportion of registered medical practitioners to population during the period under review. It gives the population of the British Isles at each decennial census since 1881, and the number of names on the *Medical Register* in the same year; also the corresponding totals in 1925, that for the general population being an estimate.

Proportion of Practitioners to Population.

Year.	Registered Practitioners.	Population, British Isles.
1881	23,275	35,241,482
1891	29,555	38,104,975
1901	36,912	41,976,827
1911	40,913	45,370,530
1921	45,408	47,146,506
1925	51,738	48,025,000

These figures show a tendency towards an increase in the ratio of doctors to population. The number of registered practitioners at the end of 1921 was almost exactly double the number at the end of 1876, but the population of Great Britain and Ireland within that period only increased by about 50 per cent. During the year 1926 the new medical registrations numbered 2,120, and there was a net increase of 876 names. Owing to the large increases during recent years, reflecting the excessive entries of students immediately after the war, there is now more than one name in the *Medical Register* to every thousand of population. In the United States of America, according to an estimate by the *Journal of the American Medical Association*, there is at the present time one medical practitioner to every 753 people. Next to the United States the British Isles appear to have the highest proportion of practitioners to population.

THE GENERAL MEDICAL COUNCIL.

THE General Medical Council was established by the Medical Act, 1858, in order "that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners." It consists of eighteen members appointed by the Universities in the United Kingdom having medical faculties; of nine members appointed by the Medical Corporations, such as the Royal Colleges of Physicians and Surgeons; of five members appointed by His Majesty in Council; and of six members directly elected by members of the profession as a whole—a total of thirty-eight. To these are added three dentists who are members of the Dental Board, and are appointed for dental business. Although the eighteen members appointed by the Universities and the five members appointed by His Majesty in Council may all be laymen, only one layman has so far been appointed and that was by the Privy Council in 1926.

The Council's offices are at 44, Hallam Street, Portland Place, London, W.1, and it has Branch Offices at 20, Queen Street, Edinburgh, and 35, Dawson Street, Dublin.

The Council exists for the protection of the public and not of the profession. Its principal duties are, first, to see that no person obtains a qualification without a proper course of study and examination; secondly, to keep the *Medical Register*; and thirdly, to publish the *British Pharmacopoeia*. It is the appearance of a name upon the *Medical Register*, and not the possession of a degree or diploma, that constitutes a person a duly or legally qualified practitioner of medicine.

The Council has no power to make rules in regard to the medical curriculum or examination, but it can pass resolutions and make recommendations relating thereto, and if any of these were ignored by the licensing bodies, it would be open to the Council to make representations to the Privy Council, which if it thought fit might order that the qualifications obtained from such bodies should not be registrable.

The name of any medical practitioner who has been convicted of felony or misdemeanour, or who is proved before the Council itself to have been guilty of "infamous conduct in a professional respect," may be erased from the *Medical Register*.

The Medical Acts prohibit attempts being made to impose restriction as to any theory of medicine or surgery, and, once a practitioner has been trained and tested in the knowledge essential for public safety, he may adopt any "theory" of medicine or surgery in which he honestly believes. The Medical Acts do not prohibit the practice of medicine by unregistered persons, but if they "wilfully and falsely" assume any title implying registration they are liable to prosecution. In this respect the Medical Acts differ from the Midwives and the Dentists Acts, which entirely preclude the practice of midwifery or dentistry by unregistered persons. Unregistered medical practitioners, however, are under certain disabilities, for they cannot recover charges for medical or surgical attendance, etc., in a court of law; they cannot hold an appointment as a medical officer in the Military or Naval Services, or on ships; they cannot give any valid certificate which is required by any Act from a medical practitioner—for example, certificate of death; and they cannot obtain dangerous drugs.

An account of the recommendations that the Council has drawn up in respect of the education of medical students here follows.

REGISTRATION OF MEDICAL STUDENTS.

The Council recommends that every intending student of medicine should be registered as such at one of its three offices, whose addresses are given overleaf.

Candidates must produce evidence (*a*) that they have attained the age of 17 years; (*b*) that they have passed an examination in general education which is accepted for matriculation or entrance to the Faculties of Arts or Pure Science in a university in the United Kingdom; (*c*) and in addition thereto that they have passed an examination in elementary chemistry and elementary physics conducted or recognized by one of the licensing bodies.

Application for registration should be addressed to the Registrar for the division of the United Kingdom in which the applicant is residing—England and Wales, or Scotland, or Ireland. It must be made on a special form, which can be obtained from one of the offices of the General Medical Council itself or from one of the various licensing bodies and medical schools.

The regulations with regard to registration apply equally to medical and dental students, with the exception that in the case of the latter pupilage with a registered dental practitioner may be regarded as a commencement of professional study, and that applications for registration should be addressed to the London office only.

PROFESSIONAL EDUCATION.

The rule is that it is only from the date which appears against his name in the *Students Register* that the medical student's career officially begins; thereafter five years at least must pass before he can present himself for the final examination for any diploma which entitles its lawful possessor to registration as a qualified medical practitioner under the Medical Acts; but to meet the circumstances brought about by the dates at which sessions of the medical schools begin and end, the close of the fifth year may be reckoned as occurring at the expiration of fifty-seven months from the date of registration. In any case, the period of five years must be one of bona-fide study; and in every course the following subjects should be included:

(i) Elements of General Biology, including an introduction to Embryology. This course, if the Licensing Bodies permit, may be taken before registration, and the examination may be passed immediately after registration.
(ii) Chemistry, Physics, and Biology in their application to Medicine.
(iii) Human Anatomy and Physiology, including Histology, Elements of Embryology, Biochemistry, and Biophysics.
(iv) Elementary Bacteriology, prior to regular clinical appointments.
(v) Pathology, general, special, and clinical, and Morbid Anatomy.
(vi) Pharmacology and Materia Medica, to be taken concurrently with clinical instruction.
(vii) Forensic Medicine, Hygiene, and Public Health.
(viii) Medicine, including Applied Anatomy and Physiology, Clinical Pathology and Therapeutics, Children's Diseases, Acute Infectious Diseases, Tuberculosis, Mental Diseases, Skin Diseases, and Vaccination.
(ix) Surgery, including Applied Anatomy and Physiology and Clinical Pathology, Anaesthetics, Diseases of the Eye, Ear, Throat, and Nose, Radiology, Venereal Diseases, and Orthopaedics.
(x) Midwifery and Diseases of Women, including ante-natal conditions and infant hygiene.

The Council recommends that during the last three of the five academic years clinical subjects shall be studied.

The first two years must be passed at a university, or at a school of medicine recognized by any of the licensing bodies enumerated in the schedule to the Medical Act of 1858, and the remainder must be devoted to clinical work at any public hospital or dispensary at home or abroad which is recognized by a licensing body.

SPECIAL CONSIDERATIONS.

The requirements of the General Medical Council in respect of the education of those who desire to enter the medical profession have now been given in outline, but before leaving this part of the subject the steps which the aspirant should take may be rehearsed in their due order:

(1) Pass an examination in arts;
(2) Pass an examination conducted or recognized by a licensing body in elementary physics and elementary chemistry;
(3) Enter himself at a university or at a medical school recognized by one of the licensing bodies;
(4) Obtain registration as a medical student;
(5) Study for a minimum of five years certain prescribed subjects;
(6) Meanwhile pass sundry intermediate examinations; and at the end of the fifth year pass a "qualifying examination" which will entitle him to receive from a licensing body a legal authority to practise.

The Minimum Period.—It must be remembered that the period of five years is a minimum; more is often required even by the man of good abilities and reasonable industry, and some of the universities prescribe a longer period. Besides these qualities a student, to obtain a registrable qualification in the minimum period of five years, or fifty-seven months, must have a considerable amount of good luck; in other words, he must keep in good health through

every term, and never fail at a single examination. Thus, for instance, before presenting himself for any examination he must be "signed up" for the subjects covered by that examination; this means that his teachers have to certify that he has diligently attended the required number of lectures or classes in the subjects in question. If, however, the student happens to be ill during the term when such lectures or classes are taking place he may miss enough of them to make it impossible for him to be signed up. Then, again, should he fail to satisfy the examiners at some examination, he cannot present himself for re-examination for at least three months. This generally entails further consequences, because apart from the student's success at the next stage in his career being imperilled by the need for restudying the subjects in which he has failed, the Examining Boards usually insist upon a definite interval elapsing between one examination and the next. Further, many Boards have refused to recognize lectures and classes which have been attended before the student has passed the requisite examination in earlier subjects, and the Council now recommends that the professional examinations in anatomy and physiology be passed before the minimum period of three years' subsequent study be entered on; in other words, no clinical study should count as such until these examinations have been successfully completed. Failure at an examination may thus not only mean deferment of the date of examinations, but deferment of the beginning of the student's study of certain subjects. It is thus exceedingly easy for a student to fail to qualify in five years, and, as a fact, the majority of students take longer.

In speaking of the minimum period, it is to be remembered also that that time is only sufficient to gain a registrable qualification, such as a Bachelorship of Medicine or Surgery or the diplomas of the Royal Colleges. Those who wish to take a higher qualification—for instance, the F.R.C.S.Eng.—must prolong their work for another year or more. So, too, must in some cases those who desire to convert their Bachelorship into a Doctorate. This may entail further formal examination, but at some universities the M.D. is obtainable on presentation of a thesis when the Bachelor has attained a certain age and has practised for a certain number of years. However, a student's career proper may be considered, perhaps, to have ended when he obtains his first registrable qualification, for while preparing himself for any further tests he can, and usually does, hold some junior appointment which more or less covers his expenses.

MEMORANDUM ON STUDENTS' REGISTRATION.

The following memorandum has been drawn up by the Registrar of the General Medical Council as to the procedure for those who desire to be registered as medical or dental students.

The requirements for the registration of medical and dental students are the same, and every intending student should, in his own interest, register as soon as he commences his professional curriculum.

A recognized examination in general education must first be passed. If the student intends to obtain a university degree, he should apply to the university he selects for information as to its matriculation requirements in arts or pure science, or as to any examinations which may be accepted in fulfilment thereof. If the student intends to obtain a qualification from one of the licensing corporations (these are the Conjoint Boards in England, Scotland, and Ireland, the Society of Apothecaries of London, and the Apothecaries' Hall of Dublin), any of the examinations indicated below will be accepted. The subjects required are: (1) English, (2) Mathematics (elementary), (3) a language other than English, and (4) a fourth subject as required by the regulations of the particular examination, to be chosen from the following—namely, History, Geography, Physical Science, Natural Science, Latin, Greek, Hebrew, French, German, or other language accepted by a university for matriculation.

The requirements of the preliminary examination in general education being satisfied, it is then necessary for the student to pass a further or Pre-Registration Examination (theoretical and practical) in Elementary Chemistry and Elementary Physics, which is conducted or recognized by one of the licensing bodies—that is, a university or licensing corporation. These subjects must be passed *in addition* to those included in the preliminary examination—for example, chemistry taken as one of the four required subjects in the preliminary examination cannot also count as one of the subjects of the Pre-Registration Examination. These subjects may be studied at a university or medical school, or at a secondary school or other institution recognized by the body whose pre-registration examination it is intended to take. The student should, in every case, write beforehand to the body whose qualification he desires to obtain (a list will be found below) for information in regard to its requirements for this examination.

These two examinations (in general education and in physics and chemistry) having been passed and the student having attained the age of 17 years, he should apply to one of the universities or one of the medical schools for admission to its course of medical study. When medical study has been begun, he should apply to the Dean of the school, or to the Registrar of one of the branches of the General Medical Council, for a form of application for registration as a student, and should have it completed and sent in to one of the Branch Councils as soon as possible. There is no fee for this registration. The medical curriculum will extend for at least five years, and the dental curriculum for at least four years, from the date of registration as a student.

A student who has, before registration, studied the subject of elementary biology at an institution recognized by one of the licensing bodies may, if the body sees fit, be admitted to the professional examination in this subject immediately after his registration as a student. For information in regard to this he should apply to the body whose medical qualification he seeks.

A dental student may commence his curriculum, if he so desires, as a pupil in dental mechanics of a registered dental practitioner; but study at a dental school is to be preferred. If, however, he is apprenticed to a dental practitioner, he will have to devote twice as much time to instruction in dental mechanics as he would if he had taken this subject in a school. This will have the effect of lengthening the curriculum. In any case a student can only obtain a concession of twelve months out of the four years' curriculum.

The addresses of the Branch Registrars are:

General Medical Council, 44, Hallam Street, Portland Place, London, W.1.
Scottish Branch Council, 20, Queen Street, Edinburgh.
Irish Branch Council, 35, Dawson Street, Dublin.

Examining Bodies in Preliminary Education.

The following is a list of the officials of the examining bodies in preliminary education, with the names of the examinations in parentheses.

Registrar, Queen's University of Belfast, Belfast. (Matriculation.)
Registrar, The University of Birmingham. (Matriculation.)
Registrar, The University, Bristol. (Matriculation, School Certificate, or Higher School Certificate.)
Assistant Registrary, The University, Cambridge. (Previous.)
Secretary, Cambridge Local Examinations, Syndicate Buildings, Cambridge. (School or Higher School Certificate.)
Medical Registrar, University of Dublin School of Physic, Dublin. (Junior Freshman, Special Preliminary, Junior Exhibition, or Examination for first, second, third, or fourth year in Arts.)
Registrar, University of Durham College of Medicine, Newcastle-on-Tyne. (School or Higher School Certificate.)
Registrar, Irish Conjoint Board, Royal College of Surgeons, Dublin. (Preliminary Examination.)
Registrar, National University of Ireland, Dublin. (Matriculation.)
Joint Commissioners, Intermediate Education Board of Ireland, 1, Hume Street, Dublin. (Senior Grade Examination.)
Assistant Secretary, Ministry of Education, Belfast. (Senior Grade Intermediate Examination.)
Academic Registrar, The University of London, South Kensington, London, S.W.7. (Matriculation, General, or Higher School Certificate.)
Secretary, Northern Universities Joint Matriculation Board, 315, Oxford Road, Manchester. (Matriculation School or Higher School Certificate.)
Registrar, The University, Oxford. (Responsions.)
Secretary, Oxford and Cambridge Schools Examination Board, Schools Examination Office, Balliol College, Oxford. (School or Higher School Certificate.)
Secretary, Oxford Local Examinations, University Press, Oxford. (School or Higher School Certificate.)
Secretary, College of Preceptors, Bloomsbury Square, London, W.C.2. (Senior Certificate.)
Secretary, Educational Institute of Scotland, 47, Moray Place, Edinburgh. (Preliminary Medical Certificate.)
Secretary, Scottish Education Department, 14, Queen Street, Edinburgh. (Leaving Certificate.)
Secretary, Scottish Universities Entrance Board, 81, North Street, St. Andrews. (Scottish Universities Preliminary Examination.)
Registrar, University of Wales, Cathays Park, Cardiff. (Matriculation.)
Clerk, Central Welsh Board, Cardiff. (School or Higher School Certificate.)

[*Note.*—School Certificates other than "Higher" must show "Credits" *in each of the prescribed subjects.*]

Licensing Bodies.

The following is a list of the officials of licensing bodies and their addresses:

Secretary, English Conjoint Board, 8, Queen Square, Bloomsbury, W.C.1.
Clerk, Society of Apothecaries, Blackfriars, E.C.4.
Registrar, The University, Oxford.
Registrary, The University, Cambridge.
Secretary, University of Durham College of Medicine, Newcastle-on-Tyne.
Principal Officer, University of London, South Kensington, S.W.7.
Registrar, Victoria University, Manchester.
Registrar, The University, Birmingham.
Registrar, The University, Liverpool.
Registrar, The University, Leeds.
Registrar, The University, Sheffield.
Registrar, The University, Bristol.
Registrar, University of Wales, Cathays Park, Cardiff.
Secretary, Scottish Conjoint Board, 49, Lauriston Place, Edinburgh.

Dean of the Faculty of Medicine, The University, Edinburgh.
Registrar, The University, Glasgow.
Registrar, Royal Faculty of Physicians and Surgeons, Glasgow (*Dental*).
Secretary of the Medical Faculty, The University, Aberdeen.
Secretary, The University, St. Andrews.
Secretary, Irish Conjoint Board, Royal College of Surgeons, Dublin.
Registrar, Apothecaries' Hall of Ireland, 95, Merrion Square, Dublin.
Medical Registrar, The University, Dublin.
Registrar, National University of Ireland, Dublin.
Registrar, Queen's University, Belfast.

Medical Schools.

The following is a list of medical schools (other than universities) and their officials:

Registrar, College of Medicine, Newcastle-on-Tyne.
Dean of the Medical College, St. Bartholomew's Hospital, London, E.C.1.
Dean of the Medical School, Charing Cross Hospital, S.W.1.
Dean of the Medical School, St. George's Hospital, S.W.1.
Dean of the Medical School, Guy's Hospital, S.E.1.
Dean of the Medical School, King's College, Strand, W.C.1.
Dean of the Medical School, King's College Hospital, S.E.5.
Dean of the Medical College, London Hospital, E.1.
Dean of the Medical School, St. Mary's Hospital, W.2.
Dean of the Medical School, Middlesex Hospital, W.1.
Dean of the Medical School, St. Thomas's Hospital, S.E.1.
Dean of the Medical School, University College Hospital, W.C.1.
Dean of the Medical School, Westminster Hospital, S.W.1.
Dean of the School of Medicine for Women, 8, Hunter Street, W.C.1.
*Registrar, University College, Aberystwyth.
*Registrar, University College, Bangor.
*Registrar, University College, Cardiff.
Dean of the Medical School, Welsh National School of Medicine, Cardiff.
Dean of the Medical School, University College, Swansea.
Dean of the Medical School, University College, Dundee.
Dean, School of Medicine of the Royal Colleges, Surgeons' Hall, Edinburgh.
Dean, St. Mungo's College, Glasgow.
Dean, Anderson's College of Medicine, Glasgow.
Mistress, Queen Margaret College, Glasgow.
Medical Registrar, University of Dublin, Trinity College, Dublin.
Registrar, University College, Cork.
Registrar, University College, Dublin.
Secretary, School of Medicine, Royal College of Surgeons, Dublin.
Registrar, University College, Galway.

* First year only.

Dental Schools.

The following is a list of dental schools and their officials in Great Britain and Ireland:

BELFAST: Dean of the Medical Faculty, Queen's University.
BIRMINGHAM: Dean of the Dental Hospital, 132, Great Charles Street.
BRISTOL: Dean of the Medical Faculty, The University.
DUBLIN:
Medical Registrar, University of Dublin, Trinity College.
Registrar, Schools of Surgery, Royal College of Surgeons in Ireland.
DUNDEE: Dean of the Dental School, 27, Tay Street
EDINBURGH: Dean of the Dental School, 31, Chambers Street.
GLASGOW: Dean, Incorporated Dental Hospital and School, Dalhousie Street.
LEEDS: Dean of the Medical Faculty, The University.
LIVERPOOL: Director of Dental Education, School of Dental Surgery, Boundary Place.
LONDON:
Dean of the Dental School, Guy's Hospital, London Bridge, S.E.1.
Dean of the Medical School, King's College Hospital, Denmark Hill, S.E.5.
Dean of the Dental School, London Hospital, Turner Street, Mile End, E.1.
Dean, Royal Dental Hospital, Leicester Square, W.C.2.
Sub-Dean for Dental Students, University College Hospital Medical School, University Street, Gower Street, W.C.1.
MANCHESTER: Dean of the Dental School, Oxford Road.
NEWCASTLE: Dean of the Dental School, Handyside's Buildings, Percy Street.
SHEFFIELD: Secretary, Board of Dental Studies, The University.

PROFESSIONAL EXAMINATION.

The Council's Recommendations.

The following recommendations of the General Medical Council in regard to professional examinations for medical and surgical qualifications were adopted in May, 1922:

1. In order to secure due continuity and sequence in medical study, two or more Professional Examinations in the earlier subjects should be held antecedently to the Final Examination in Medicine, Surgery, and Midwifery.

2. Three years at least should intervene between the date of passing the Professional Examination in Anatomy and Physiology and that of admission to the Final Examination in Medicine, Surgery, and Midwifery.

3. A candidate remitted in any subject of a Professional Examination should, before he is readmitted to examination therein, be required to produce satisfactory evidence that he has, during the interval of remission, pursued the study of the subject in which he was rejected. Candidates who obtain less than 30 per cent. of the marks in any subject should be remitted for a longer period than three months.

4. In all the Professional Examinations sufficient time should be assigned to practical work, in order to test the thoroughness of the candidate's knowledge and to encourage practical methods of study.

5. Candidates in all their examination work should be carefully supervised.

6. Two examiners should always participate in the oral examination of a candidate, except in subordinate parts of practical examinations.

7. In all written examinations the questions in each subject should be submitted for the approval of all the examiners in that subject.

8. In all written examinations an average of at least half an hour should be allowed for a candidate to answer each question.

9. It is desirable that examiners, and in particular those for the Final Examination in Medicine, Surgery, and Midwifery, should be appointed or re-elected for at least three consecutive years.

10. Whatever may be the system of marking, the percentage for a pass in each subject should not be less than 50.

11. In the regulations for the several examinations it should be provided that examiners, in assessing marks, be empowered to take into account the duly attested records of the work done by the candidate throughout his course of study in the subject of the examination.

12. The Final Examination in Medicine, Surgery, and Midwifery, with the exception of the Clinical and Practical Examination in Midwifery and Gynaecology, must not be passed before the close of the fifth academic year of medical study.

13. The three portions of the Final Examination in Medicine, Surgery, and Midwifery should not be further subdivided into sections which may be entered for or passed separately.

14. Compensation in respect of marks as between the three different portions of the Final or Qualifying Examination—namely, Medicine, Surgery, and Midwifery—is contrary to the intention of the Medical Act (1886).

15. The Final Examination should include clinical and practical examinations in Midwifery and Gynaecology.

16. The clinical examination in Medicine, Surgery, and Midwifery should be held in properly equipped hospitals or examination halls well provided with suitable patients.

17. In the examinations in clinical medicine at least one hour, and in clinical surgery at least half an hour, should be allowed to the candidate for the examination of, and report on, his principal case.

18. In Medicine, in Surgery, and in Midwifery, no candidate should be allowed to pass who fails to obtain 50 per cent. of the aggregate marks assigned to the whole examination; or who fails to obtain 50 per cent. of the marks assigned to the clinical examination; or who fails to obtain 40 per cent. of the aggregate of the marks assigned to the written and oral examination. In Midwifery, where a clinical examination is not held, the duly attested records of the work done by the candidate in clinical midwifery must be presented to the examiners for assessment in the Final Examination; and no candidate should be allowed to pass who fails to obtain 50 per cent. of the aggregate marks assigned to Clinical and Practical Midwifery and Gynaecology.

19. The Final Examination should include the examination of secretions, the testing of urine, clinical microscopy, and prescription writing, and there should always be an oral examination in Medicine, Surgery, and Midwifery, which should include an examination on pathological specimens.

20. At the Final Examination each candidate should be submitted to a practical and oral examination in Pathology (macroscopic and microscopic), unless this has been included in a Professional Examination preceding the Final Examination.

21. Whatever be the method of entry for the Final Examination all candidates should be required to complete the three portions of the Final Examination within a period of nineteen months.

This section of the Educational Number would be incomplete without brief mention of the memorandum, lately drawn up by the Registrar of the General Medical Council, on the procedure to be adopted by those who desire to enter the profession of medicine, to which reference is made in the introductory article at page 381. This pamphlet (price 1s. post free) sets out in plain language the information for which the Registrar is often asked by prospective medical students or their guardians.

The English Universities.

THERE are eleven universities in England and Wales, and some account of each of them follows. They all have now fully developed medical faculties. Until recently the only exception was the University of Wales, whose constituent colleges are those of Aberystwyth, Bangor, Cardiff, and Swansea. This university grants degrees, and has laid down a six years' curriculum for candidates for the M.B. and B.Ch. degrees, and it now provides, at the Welsh National School of Medicine at Cardiff (see page 395), instruction in all the subjects of the medical curriculum.

UNIVERSITY OF OXFORD.

THE professional degrees conferred by this university are those of Bachelor of Medicine (B.M.), Bachelor of Surgery (B.Ch.), Doctor of Medicine (D.M.), and Master of Surgery (M.Ch.). It also grants a Diploma in Public Health and a Diploma in Ophthalmology. On receiving the B.M. the candidate is entitled to registration by the General Medical Council. In favourable circumstances this degree and the B.Ch. may be obtained in six or seven years from matriculation. Before receiving either, the candidate must have taken a degree in arts (B.A.), for which three years' residence within the university is necessary. This, however, does not necessarily mean deferment of professional study for that period, for the subjects chosen for the arts course may be the same as those in which examinations would in any case have to be passed for the medical degree.

In accordance with a statute which came into force on October 7th, 1920, women may be matriculated and admitted to degrees in the university. The statute is retrospective under certain conditions. Before matriculation a woman must have been admitted as a member of one of the five societies of women students (Lady Margaret Hall, Somerville College, St. Hugh's College, St. Hilda's Hall, or the Society of Oxford Home Students). Women members of the university are admitted to all degrees, except those in divinity, under the same conditions as those laid down for men in regard to examinations, courses of study, and fees, and under corresponding conditions as to residence at the university. Among the university diplomas open to women are those in anthropology, ophthalmology, and public health.

There are numerous avenues to the B.A. degree; but that which constitutes the *normal* course for medical students, as being the most closely related to their medical studies, is the following: By passing Responsions (or one of the examinations which are accepted as equivalent), the Scripture examination, some of the preliminary examinations in the Natural Science School,[1] in the first public examination; and one of the final honour examinations in the Final Honour School of Natural Science—Physiology being that usually taken.

Responsions and the preliminary examinations in Natural Science may be passed before a candidate is a member of the university[2]; a final honour school may be taken at the end of the third or fourth academical year—that is, within nine or twelve terms respectively; the preliminary examinations of the Natural Science School may be taken as soon as Responsions has been passed or exemption obtained.

PROFESSIONAL DEGREES.

To obtain the B.M., B.Ch. degrees the candidate must first pass in four of the subjects of the Preliminary Examination of the Natural Science School—namely, physics, chemistry, zoology, and botany.

He then has two further examinations to pass—the First B.M. and the Second B.M. These take place twice a year, the first on the Thursday, the second on the Wednesday, of the eighth week of Michaelmas and Trinity terms. Every candidate at the First B.M. is examined in human anatomy, in physiology, and in organic chemistry, but is excused from physiology if he has obtained a first or second class in the Honour School of Physiology, and from organic chemistry if he has satisfied the examiners in Part I of the Honour School of Chemistry. Once he has passed this examination he can, on production of certain certificates, be examined as soon as he pleases in pathology, forensic medicine and hygiene, materia medica, and pharmacology (subjects of the second examination), but cannot present himself for the remaining subjects—medicine, surgery, and midwifery—until the eighteenth term from the day of his matriculation *unless he be already a registered medical practitioner*, and not until a period of at least thirty-three months has elapsed from the date of his passing the first examination, and he must pass in all the three subjects at one and the same time.

[1] The four subjects of the medical preliminary examinations are four of the subjects in the natural science preliminary, and can be commenced directly after passing Responsions.

[2] Membership is constituted by Matriculation and by becoming either a member of a College or a Hall or a non-collegiate student.

Before admission to the Second B.M. examination the student must produce certificates of instruction from a medical school recognized by the university, of having acted as clinical clerk and dresser, each for six months, and as *post-mortem* clerk for three months, of attendance on labours, of instruction in infectious and mental diseases and ophthalmology, and of proficiency in vaccination and the administration of anaesthetics.[3] He must also produce certificates of attendance in laboratory courses in pathology, bacteriology, and pharmacology, either in Oxford or in a recognized medical school.

D.M. AND M.CH. DEGREES.

A Bachelor of Medicine who wishes to proceed to the D.M. must have entered his thirtieth term and must present a dissertation for approval by the appointed examiners on a subject previously approved by the Regius Professor of Medicine. If a candidate for the M.Ch. he must have entered his twenty-first term and must pass an examination, which is held in June.

D.P.H. AND D.O.

Examinations for the Diploma in Public Health are held in Trinity and Michaelmas terms; that for the Diploma in Ophthalmology is held annually in March. For the Diploma in Ophthalmology attendance on a twelve months' course of clinical ophthalmology in hospitals or institutions recognized for the purpose by the Board of the Faculty of Medicine, and on a course of instruction in Oxford lasting two months, is obligatory. Candidates must have their names on the *Medical Register* of the United Kingdom, unless, being Bachelors or Doctors of Medicine of universities outside the United Kingdom, they have obtained special permission from the Board of the Faculty of Medicine.

TEACHING.

The several colleges provide their undergraduate members with tutors for all examinations up to the B.A. degree. In addition, the university provides certain courses of instruction, including lectures, demonstrations, and practical work, which cover all the subjects of the Preliminary Examination and First B.M., and those of the Final Examination.

SCHOLARSHIPS.

Most colleges grant scholarships open to intending medical students of the maximum value of £100 a year, tenable for four years, in natural science, chemistry, physics and biology. Exhibitions of varying value are also awarded in these subjects. At two colleges (University and Pembroke) there are medical entrance scholarships of £100 a year. Particulars can be obtained on application to the college tutors. Scholarships for women are also offered by the various women's colleges, from the principals of whom details of the examinations may be obtained. A Radcliffe Travelling Fellowship of £300 a year, tenable for two years, is conferred annually; candidates must have taken the B.M. degree. A Schorstein Research Fellowship of £200 a year for two years is awarded biennially. The Fellow must engage in research in one of the Medical Departments of the University. A George Herbert Hunt Travelling Scholarship of about £100 is awarded biennially to enable a young medical graduate to spend three months abroad in medical study. A Philip Walker Studentship in Pathology of £200 a year, tenable for two years, is awarded biennially for the encouragement of research in pathology, as also are the Rolleston Memorial Prize and the Radcliffe Prize (£50), for research in natural science (including pathology), and the three Theodore Williams Scholarships in Anatomy, Physiology, and Pathology, of the value of £50 each, tenable for two years. A Radcliffe Scholarship in Pharmacology of £50 for one year, open to the University, is awarded annually by the Master and Fellows of University College. A Burney Yeo King's College Hospital Scholarship of £80 is awarded annually.

FEES.

An annual fee of £4 10s. is paid to the university for the first four years, being reduced to £1 when the B.A. has been taken. For the degree the fees are: the B.A., £7 10s.; the B.M. and B.Ch., £14; the D.M., £25; the M.Ch., £12. College fees, varying in amount, are paid for the first four years of membership and in taking degrees. Tuition fees vary from £21 to £30. The minimum annual cost of living during the three university terms may be regarded as not less than £180, or for women not less than £140.

For further information application may be made to Dr. E. W. Ainley Walker, Dean of the School of Medicine, University of Oxford.

[3] For the certificates that will be required from candidates amenable to the new Regulations of the General Medical Council, see *Examination Statutes*, Clarendon Press, Oxford, 1925 edition

UNIVERSITY OF CAMBRIDGE.

THE professional degrees given by this university are those of Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.Chir.), each of which entitles the possessor to admission to the *Register* by the General Medical Council, and the higher degrees of Doctor of Medicine and Master of Surgery. It also grants Diplomas in Tropical Medicine, in Public Health, in Hygiene, and in Medical Radiology and Electrology to medical practitioners, not necessarily graduates of the university. Information regarding these diplomas will be found in later sections under the headings Tropical Medicine, Public Health, and Radiology. A candidate for the M.B., B.Chir. degrees need not possess a degree in arts; it is sufficient if he has passed the Previous examination or some other examination accepted by the university as its equivalent. Most students, however, are advised to take the B.A. degree, preferably by obtaining honours in the Natural Science Tripos at the end of their third year. Under the new regulations the attainment of a sufficient standard in chemistry or in physiology in this Tripos will secure exemption from the corresponding tests in the First and Second M.B. examinations. Women students, members of Girton College or Newnham College, are now admitted to the M.B. examinations.

PROFESSIONAL EXAMINATIONS.

To obtain the M.B. degree the candidate must pass three examinations; those who are finally successful may receive the B.Chir. degree (which is a complete registrable qualification) without further examination.

First M.B.—This comprises (1) general and inorganic chemistry, (2) mechanics, (3) physics, (4) elementary biology. The parts may be taken together or separately. In either case the candidate before admission to examination must have satisfied the requirements in respect of the Previous examination and have paid the registration fee. Certain exemptions from the First M.B. Examination are allowed; the regulations may be obtained from the Registrary. The complete examination is held twice a year—in October and June; an additional examination, in Parts 2 and 4, is held in December.

Second M.B.—This examination comprises: Part I, organic chemistry; Part II, human anatomy and physiology; Part III, elementary pharmacology, including pharmaceutical chemistry and the elements of general pathology. No student is admitted to the first part of the second examination until he has passed the first part of the First Examination. No student is admitted to the second part of the Second Examination until he has passed all parts of the first examination. No student shall be admitted to the third part of the Second Examination until he has passed the first and second parts of the Second Examination. The candidate must be signed up in all three subjects and have dissected for one academic year. The examinations for Part I and II are held in December and June; that for Part III in October and April.

Third M.B.—This is divided into two parts, to neither of which is the candidate admitted until he has passed the examinations previously mentioned. A candidate for the first part, which deals with the principles and practice of surgery (including special pathology) and midwifery and diseases peculiar to women, must have completed five years of medical study and be signed up in these subjects and have completed two years and a half of hospital practice. Before admission to the second part the candidate must have completed five years of medical study, and be duly signed up in all subjects and have completed three years of hospital practice. He must also possess certificates showing that he has fulfilled all the recommendations as well as the requirements of the General Medical Council. The examination is in the principles and practice of physic (including diseases of children, mental diseases, and medical jurisprudence), pathology (including hygiene and preventive medicine), and pharmacology (including therapeutics and toxicology). The Third M.B. examinations are held twice a year—in June and December.

Act for the M.B.—Before receiving his M.B. degree a candidate who has been successful at the Final M.B. examinations has to write a thesis. This he reads in public on an assigned day, and is then questioned concerning it and other subjects of medicine by the Regius Professor of Physic. If approved at this test he is then certified as having "kept the Act" satisfactorily, and in due course receives his degree. Medical degrees may be taken in absence by those living abroad, the candidate sending to the Regius Professor of Physic a dissertation, which is laid before the Degree Committee.

THE HIGHER DEGREES.

The M.D. degree may be taken by a Bachelor of Medicine of three years' standing (and a Master of Arts of four years' standing who has completed the course required for M.B.) after writing a thesis approved by the M.D. Degree Committee, and keeping a further Act, at which he reads his thesis and is examined thereon. Previously to the Act being kept a topic taken from the general subject of his thesis (whether it be physiology, pathology, pharmacology, practice of medicine, State medicine, or the history of medicine) is submitted to the candidate, on which he is required to write an extempore essay.

The M.Chir. degree may be granted to a candidate who has qualified for the B.Chir. at least two years previously; he is then examined in pathology, surgery, surgical anatomy, and surgical operations. The tests are partly in writing, partly oral, and partly practical: they include the writing of an extempore essay.

FEES.

In addition to college fees, tutorial fees, and the expense of living, the following examination fees are payable: First M.B., £5 5s.; Second M.B., £6 6s.; Third M.B., £10 10s. For schedules referring to the examinations, lists of schools recognized by the university, and other information, application should be made to the University Registrary, Cambridge.

UNIVERSITY OF LONDON.

UNDER the regulations of the University of London the degrees obtainable in the Faculty of Medicine are those of Bachelor of Medicine and Surgery, Master of Surgery in four branches, and Doctor of Medicine in six different branches. The university has its own matriculation examination, and this is of so peculiar a kind that candidates should obtain and carefully study the booklets relating to it. The matriculation examination is open to any person, of either sex, who has attained the age of 16. It is held in January, June, and September, and lasts four days; the first two take place both in London and in certain provincial centres; the September examination is held in London only.

In no circumstances is a degree granted to anyone in less than three years after the date at which he passed the Matriculation Examination or obtained registration in some other way; and, unless they are already registered medical practitioners of a certain age and standing, all medical students must pass not less than five and a half years in professional study subsequent to matriculation, of which the last three years must be spent at a school of advanced medical studies.

PROFESSIONAL EXAMINATIONS.

M.B., B.S.—There are three examinations, the last two being subdivided. They are held twice a year.

The First Examination (held in July and December) covers inorganic chemistry, general biology, and physics, there being two papers, a practical test, and a possible oral test in each subject. The names of successful candidates are placed in alphabetical order, with a note as to any subject in which a candidate has distinguished himself or herself.

The Second Examination is held in March and July. Part I cannot be passed within six months of the passing of the First Examination. It covers organic chemistry, the candidate's knowledge being tested as in the earlier examination. It is a pass examination, but a mark of distinction may be won. Candidates for Part II must have passed the First Examination at least eighteen months

previously, besides having completed Part I of the Second Examination. The subjects are anatomy, physiology, and pharmacology, the tests being written, oral, and practical. Candidates who fail in one subject may sit for re-examination in that subject alone if the examiners think fit.

No candidate is admitted to the Third M.B., B.S. Examination within three academic years from the date of his completing the Second Examination. The subjects are medicine (including mental diseases), pathology, forensic medicine and hygiene, surgery, and obstetrics and gynaecology. They may be divided into two groups, one comprising medicine, pathology, forensic medicine, and hygiene, and the other surgery and obstetrics and gynaecology. Either group may be taken first at the option of the candidate, or the groups may be taken together. Only candidates who show a competent knowledge of all the subjects comprising a group are passed. There is no separate examination held for honours, but the names of successful candidates are divided into an honours list and a pass list, and a university medal may be awarded the candidate who has most distinguished himself in the whole examination.

The Higher Degrees.

M.D.—An examination for the M.D. is held twice yearly—in December and July. Every candidate must have passed the examination for the M.B., B.S., unless he became M.B. before May, 1904. He may present himself for examination in any one of the following branches: (1) medicine, (2) pathology, (3) mental diseases and psychology, (4) midwifery and diseases of women, (5) State medicine, (6) tropical medicine, and, if he wishes, may pass also in another branch at a subsequent examination.

The period that must elapse between acquiring the M.B. and sitting for the M.D. in any branch varies between one and two years, according to the nature of the candidate's previous work, and in all cases evidence must be afforded of special study of the subject chosen; both written and practical examinations must be passed, though exemptions can be obtained from the former in exceptional circumstances. In each branch the scheme of examination is the same: two papers on its special subject, a paper on an allied subject—for example, medicine in the case of branch (4), pathology in branch (1)—an essay on one of two suggested topics connected with the special subject, and a clinical or other practical test. In any branch of the M.D. Examination a gold medal of the value of £20 may be awarded.

M.S.—The regulations with regard to the Mastership in Surgery are of a corresponding kind, but there are four branches in which it may be obtained—General Surgery, Dental Surgery, Ophthalmology and Laryngology, Otology and Rhinology.

Fees.

For Matriculation: 2½ guineas for each entry. First Examination: 6 guineas for each entry to the whole examination. For re-examination in one subject the fee is 2 guineas. Second Examination, Part I: 3 guineas for the first and each subsequent entry. Second Examination, Part II: 9 guineas for each entry to the whole examination. For re-examination in one subject the fee is 4 guineas. M.B., B.S. Examination: 12 guineas for each entry to the whole examination, and 6 guineas for examination or re-examination in either group. M.D. and M.S. Examinations: 20 guineas, and 10 guineas on re-examination.

Inquiries should be addressed to the Academic Registrar, the University of London, South Kensington, S.W.7.

UNIVERSITY OF BIRMINGHAM.

This university confers medical and surgical degrees—namely, M.B., Ch.B., M.D., and Ch.M.—and also diplomas and degrees in State medicine and dentistry. It has a plan, too, by which, extending his study to six instead of five years, the M.B., Ch.B. candidate may become a Bachelor in Science as well. Of the five years' curriculum, the first four must be spent, as a rule, at the university itself, the fifth being passed at any approved school or schools. Occasionally, however, the Senate will reduce the period of enforced residence to three years and exempt from the First M.B. (Part I) those who have passed elsewhere an examination considered to be its equivalent. A degree of Ph.D. is also conferred for research study in medicine under special regulations. Candidates must be graduates in medicine of a recognized university.

Students entering the Medical Faculty for the M.B., Ch.B. degrees must have passed—

(1) Either (*a*) the matriculation examination of the Joint Board of the Universities of Manchester, Liverpool, Leeds, Sheffield, and Birmingham; or (*b*) some other examination recognized as equivalent to the matriculation. Candidates for medical degrees are recommended to take Latin and a science subject—chemistry or physics—at the matriculation examination, although these subjects are no longer compulsory. The matriculation examination of the Joint Board is held in July and September. The regulations and the list of examinations accepted in lieu thereof will be sent on application to the Secretary to the Board, Joint Matriculation Board, 315, Oxford Road, Manchester.

(2) A recognized pre-medical examination in the subjects of chemistry and physics—for example, the Higher School Certificate of the Joint Matriculation Board; or a candidate may attend courses for pre-medical year in the university, October to June, taking chemistry and physics; and biology (optional).

For and after the session 1929-30 the passing of an examination in elementary biology will be compulsory before a student reading for the M.B., Ch.B.Birmingham, or for any medical or dental degree or diploma in which an examination has to be passed in this subject, can enter the Faculty of Medicine.

Professional Examinations.

The candidate for the M.B., Ch.B. degrees has five examinations to pass. In the Second and Final examinations the candidate must pass in all the prescribed subjects or undergo the whole examination again.

The First M.B. (Part I) deals with elementary biology, and physical and organic chemistry. The First M.B. (Part II) deals with anatomy and physiology, and the student must pass in both simultaneously. The Second M.B. deals with pathology and bacteriology, materia medica, and pharmacy. The Third M.B. takes place at the end of the fourth year, the subjects being forensic medicine, toxicology, public health, and pharmacology and therapeutics.

Final M.B.—This comprises medicine, surgery, midwifery and diseases of women, ophthalmology, and mental diseases. The candidate, in addition to more ordinary certificates, must be prepared with a certificate of having acted as a *post-mortem* clerk for three months, and received special instruction in anaesthetics and clinical instruction in diseases peculiar to women, asylum ward work, ophthalmology, children's diseases, venereal diseases, ear and throat and skin diseases, etc. In respect to ophthalmology he must show that he has learnt refraction work. He also has to present to the examiners at the time of his examination a short written commentary on a gynaecological subject or case investigated during the period of gynaecological clerking, and certificates drawn up by himself regarding four actual cases of lunacy and notes on two others.

M.D.—An ordinary candidate for this degree must be a M.B., Ch.B. of not less than one year's standing. He presents an original thesis for approval, and then passes a general examination in the principles and practice of medicine. From the latter the Board of Examiners may exempt a candidate whose thesis is of exceptional merit. The regulations respecting the Ch.M. are of the same general character. Subject to certain requirements as to special research or other post-graduate study, graduates of other universities may obtain the M.D. and Ch.M. in the same way as holders of the Birmingham M.B., Ch.B.

Fees.

The fee for matriculation is £2 (payable to Joint Matriculation Board); £2 10s. for pre-medical examination (if taken in university), and £2 10s. for each of the first four professional examinations; M.B., Ch.B. degree fee, £10; M.D. and Ch.M. examinations, £12 10s. each. For further particulars application should be made to the Dean of the Medical Faculty, University of Birmingham.

UNIVERSITY OF BRISTOL.

In the Faculty of Medicine the following degrees are conferred: Bachelor of Medicine and Bachelor of Surgery (M.B. and Ch.B.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), Bachelor of Dental Surgery (B.D.S.), and Master of Dental Surgery (M.D.S.). There are also the following diplomas: diploma in public health (D.P.H.), diploma in dental surgery (L.D.S.), and diploma in veterinary State medicine. All candidates for degrees in medicine, surgery, and dentistry are required to reach matriculation standard in the School Certificate Examination, or to pass such examination as may be regarded as equivalent by the Senate. All courses, degrees, and diplomas are open to men and women alike.

Conjoined Degrees of Bachelor of Medicine and Bachelor of Surgery.—Candidates must be not less than 21 years of age and have pursued the courses prescribed by university regulations during not less than five years after passing the first examination in chemistry and physics, of which three shall have been spent in the university, and two of these three subsequent to passing the second examination. All candidates for the degrees of M.B., Ch.B. are required to satisfy the examiners in the several subjects of three examinations.

The First Examination.—The subjects of examination are: chemistry (inorganic), physics, and biology, the courses pursued being those for the time being approved for the intermediate part of the B.Sc. curriculum. This part of the curriculum shall extend over one year. (Candidates who have passed the Higher School Certificate approved by the Board of Education in these subjects will not be required to sit for the First Examination and will be regarded as having completed one year of study.)

The Second Examination.—The subjects of examination are: organic chemistry and elementary anatomy (Part I) and advanced anatomy and physiology (Part II). Parts I and II may be passed separately or together.

The Final Examination.—The subjects of examination are: materia medica and pharmacy, pharmacology and therapeutics, general pathology, morbid anatomy, and bacteriology (Part I); special pathology, forensic medicine, toxicology, and public health, obstetrics (including diseases of women), surgery (systematic, clinical, practical, and operative, including ophthalmology and oto-rhino-laryngology), medicine (systematic, clinical, and practical, including mental diseases) (Part II). The subjects included in Part II may be taken in two groups—namely, Group I: surgery and obstetrics; Group II: medicine, public health, special pathology, forensic medicine, and toxicology. Candidates may pass Parts I and II together or separately, and the two groups of Part II may likewise be taken together or separately, but no student can obtain honours who elects to take the two groups of Part II separately. Forensic medicine and toxicology may be taken either with Part I or with Group II of Part II.

Degree of Doctor of Medicine.—Candidates must be Bachelors of the university of not less than two years' standing as such, and may elect either (1) to pass an examination in general medicine, or (2) to pass an examination in State medicine, or (3) to present a dissertation. The candidate who elects to pass the examination in State medicine must hold a diploma in public health of some university or college, and the candidate who elects to present a dissertation may be examined in the subject thereof.

Degree of Master of Surgery.—Candidates shall be Bachelors of not less than two years' standing as such, during which period they shall have attended the surgical practice of an institution approved for the purpose. They shall pass an examination in surgical anatomy, pathology, and bacteriology, and operative, clinical, and general surgery, and present to the university a dissertation on some subject of surgery. The degree may be taken also in general surgery, and a special subject—for example, oto-rhino-laryngology, ophthalmology, and gynaecology.

Diploma in Public Health.—Candidates must be at least 23 years of age, be fully registered medical practitioners of not less than two years' standing as such, and have passed the examination prescribed by regulation. The examination is divided into two parts.

UNIVERSITY OF DURHAM.

To its own undergraduates, who may be of either sex, this university grants the degrees of Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.), and Doctor of Medicine (M.D.), Master of Surgery and Doctor of Surgery (M.S. and D.Ch.), Bachelor of Hygiene, Doctor of Hygiene, and Bachelor of Dental Surgery and Master of Dental Surgery (B.D.S. and M.D.S.); it also grants diplomas in public health, psychiatry, and dental surgery. The university accepts the Durham University School Certificate Examination (if the required subjects are passed with credit) for matriculation purposes, but also accepts the tests of a considerable number of other educational bodies as a full or partial equivalent. A list may be obtained on application. In addition to satisfying the matriculation requirements of the university, every student must (1) pass a pre-registration examination in physics and inorganic chemistry conducted or recognized by the university, and (2) be registered on the books of the General Medical Council. To become a graduate, however, at the university it is not necessary to pass the major portion of the five years' curriculum within its precincts. It is sufficient if, before he presents himself for his final examination, the candidate has passed at least one year in study at the University of Durham College of Medicine, Newcastle-upon-Tyne, including the practice of the Royal Victoria Infirmary in the same city. The earlier examinations may be passed while the student works elsewhere.

PROFESSIONAL EXAMINATIONS.

There are four professional examinations for the M.B., B.S. degrees. The First, Second, and Third Examinations are held in March, June, and December, and the Final Examination in June and December. The first deals with biology and organic chemistry; the second with anatomy and physiology; the third with pathology, bacteriology, materia medica, pharmacology, general principles of therapeutics, and pharmacy, medical jurisprudence, and public health. At the Final M.B., B.S. the candidate is examined in medicine, clinical medicine and therapeutics; surgery and clinical surgery; midwifery and diseases of women and children; clinical and practical midwifery and gynaecology; and clinically in psychological medicine, diseases of the throat, nose, and ear, diseases of the skin, diseases of the eye, and diseases of children.

M.D.—A Bachelor of Medicine who wishes to proceed to this higher degree must be of at least two years' standing, and must comply with the regulations printed in the Calendar of the College of Medicine. If the candidate is not an M.B. of the university, he must be a practitioner of fifteen years' standing, 40 years of age, and submit to special tests. (See under Degrees for Practitioners, p. 416).

M.S.—Candidates for this degree must have been engaged in practice for at least two years subsequent to becoming M.B., B.S.Durham. They are submitted to an examination which covers the whole range of surgical knowledge.

D.Ch.—The university grants also the degree of Doctor of Surgery. Candidates for this degree must be registered medical practitioners, not less than 24 years of age. They must devote three years, subsequent to obtaining a registrable qualification, to the study of surgery and ancillary subjects; one at least of the three years must be spent in the university. The candidate must submit to the professor of surgery the course of study he proposes to follow, and this course must be approved by the Board of the Faculty of Medicine.

One year must be devoted mainly to work in the departments of anatomy, physiology, pathology, and bacteriology, and the candidate must submit evidence of having so worked. Not less than six months of another year must be spent as a resident surgeon in a recognized teaching hospital, and the rest of the year in the study of surgery in a recognized medical centre. Not less than six months of one of the three years must be spent in surgical study abroad.

Degree of Bachelor of Hygiene and the D.P.H.

No candidate is admitted to the final examination for the degree of B.Hy. unless he is a Bachelor of Medicine and Surgery, of not less than two years' standing, of a recognized university.

No candidate is admitted to the final examination for the D.P.H. unless he is a registered medical practitioner of not less than two years' standing.

The course of study for the B.Hy. and D.P.H. extends over a period of not less than twelve calendar months subsequent to the attainment of a registrable qualification. Candidates for the B.Hy. must attend this course at the University of Durham; candidates for the D.P.H. may attend it at the University of Durham or at any medical school or institution which is recognized by the university.

The examination for the diploma or degree consists of Part I and Part II, each of which extends over not less than two days, and is conducted by examiners specially qualified. A candidate must pass in all the subjects of Part I before being admitted to examination for Part II. In Part I, and also in Part II, a candidate must pass in all the specified subjects at one time.

The examination for Part I is practical, written, and oral, and includes the following subjects: bacteriology and parasitology (including medical entomology); chemistry and physics; and meteorology and climatology, in relation to public health. Candidates are not admitted to examination for Part I until after they have completed the prescribed courses of instruction in the subjects thereof.

The examination for Part II includes the following subjects: hygiene and sanitation (including sanitary construction); epidemiology and infectious diseases; sanitary law and vital statistics; public health administration. The examination is written and oral, and includes practical examinations in infectious diseases; food inspection, inspection of premises—dwellings, factories, workshops, schools, etc. Candidates are not admitted to examination for Part II until after they have completed the prescribed courses of instruction in the subjects thereof.

Doctor of Hygiene.

Candidates for the degree of Doctor of Hygiene must be Bachelors of Hygiene of two years' standing, and are required to satisfy the examiners that they have conducted original research in the subject of public health.

Diploma in Psychiatry.

Candidates must be registered medical practitioners, and, unless qualified before January 1st, 1911, must have attended, subsequent to passing their qualifying examinations, courses of instruction in: (*a*) anatomy; (*b*) physiology; (*c*) pathology; (*d*) bacteriology; (*e*) psychology and experimental psychology; (*f*) clinical neurology; (*g*) psychiatry; (*h*) clinical psychiatry. The examination consists of two parts, namely: (1) anatomy, physiology, pathology, and bacteriology; (2) psychology and experimental psychology, neurology, and psychiatry (systematic and clinical); and candidates may present themselves for the whole examination or for either part separately.

Licence and Degrees in Dental Surgery.

L.D.S.—Every dental student must, at the commencement of his studentship, be registered in the manner and under the conditions prescribed for medical students.

The First Examination consists of three parts, which may be passed separately: Part 1, organic chemistry; Part 2, biology; Part 3, theoretical dental mechanics, dental metallurgy (theoretical and practical). Second Examination: Anatomy, physiology (including biochemistry and biophysics), dental anatomy, and dental histology. Third Examination: Pathology and bacteriology, practical dental mechanics, dental materia medica and therapeutics. Final Examination: Medicine, surgery, dental surgery and pathology, orthodontics, operative dental surgery and dental prosthetics, and anaesthetics.

A candidate before presenting himself for examination is required to furnish certificates of instruction in the required subjects, attended after registration as a dental student at recognized colleges or medical schools.

Degree of Bachelor of Dental Surgery.—1.—Students taking their complete course of instruction in the university must pass the same matriculation tests as medical students, and the same pre-registration examination in inorganic chemistry and physics. After registration students must spend five years in the university. They must attend the practice of the Newcastle-upon-Tyne Dental Hospital for not less than two and a half years; six months of this time must be devoted to the study of the higher branches of dental science. There are four examinations. The subjects of the examinations are as follows: *First:* Biology, organic chemistry, and dental mechanics and metallurgy. *Second:* Anatomy, physiology, dental anatomy, and histology. *Third:* Pathology and bacteriology, dental materia medica and therapeutics, and practical and dental mechanics. *Final:* Medicine, surgery, dental surgery and pathology, orthodontics and operative dental surgery. In this subject knowledge of a much higher standard, and more advanced practical work, are required than for the Licence in Dental Surgery.

2.—Candidates possessing a Licence in Dental Surgery of a British university must study for at least one year in the university. During such year they must (*a*) attend a course of instruction in pathology and bacteriology, and (*b*) spend at least six months in the Newcastle-upon-Tyne Dental Hospital in the study and practice of the higher branches of dental science. They must also pass the third and final examinations for the degree of Bachelor of Dental Surgery.

Degree of Master of Dental Surgery.—Every candidate for this degree must be a Bachelor of Dental Surgery of the university of not less than two years' standing, and present an essay embodying original work and research in some subject connected with dentistry. He must also perform to the satisfaction of the examiners a piece of special dental work demanding a high degree of skill and experience.

The examinations are held concurrently with the medical examinations.

The practical examinations in dentistry are conducted at the Newcastle-upon-Tyne Dental Hospital.

FEES.

The following fees are payable: Matriculation, £2; Examinations, First, Second, and Third M.B., B.S., each £5; Final M.B., B.S., £15; M.D. and M.S., each £5; B.Hy., D.P.H., and D.Psy. each £10 10s., and D.Hy. and D.Ch. each £20; First, Second, and Third L.D.S., each £3 10s., and Final L.D.S. £5; First, Second, and Third B.D.S., each £5, Final B.D.S. £8; and M.D.S. £5. For degrees and diplomas: M.B., B.S., B.Hy., and B.D.S., each £6 6s. *plus* the sum of 10s. if it is the initial degree taken in the university; M.S. and M.D.S., each £6 6s.; M.D., D.Ch., and D.Hy., each £10; D.P.H., D.Psy., and L.D.S., each £3.

Further information may be obtained from the Registrar, University of Durham College of Medicine, Newcastle-on-Tyne.

UNIVERSITY OF LEEDS.

THE degrees granted in the Medical Faculty of this university are Bachelor of Medicine, Bachelor of Surgery (M.B. and Ch.B.), and Bachelor of Dental Surgery (B.Ch.D.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), and Master of Dental Surgery (M.Ch.D.). It also gives diplomas in public health, in psychology, in dental surgery, and in nursing.

Candidates for the M.B. must have attended courses of instruction approved by the university for not less than five years, two at least of such years having been passed in the university, at least one year being subsequent to the date of passing the first examination. They must also have matriculated by satisfying the examiners in:

I. *Either* English Composition and English Literature, *or* English Composition and History.
II. *Either* Mathematics *or* Latin.
III. IV. V. *Three* other subjects not already taken under I and II above, chosen from the following list:

1. English Literature.
2. History.
3. Geography.
4. Greek.
5. Latin.
6. French.
7. German.
8. Some one other language approved by the Board.
9. Mathematics.
10. Mechanics.
11. Physics.
12. Chemistry.
13. General Experimental Science.
14. Natural History.
15. Botany.

Provided that (*a*) candidates who take Mathematics under II above must include one of the subjects 4—8; (*b*) candidates who take Latin under II above must include one of the subjects 9—15. In all cases Mathematics is a compulsory subject for admission to the Faculty of Medicine.

Exemption from the examination may be granted to applicants holding certificates of having passed examinations of a standard deemed by the Matriculation Board to be at least equal to the Board's examination.

PROFESSIONAL EXAMINATIONS.

The examinations for the M.B., Ch.B. number three. The first deals with (1) Physics and Chemistry, (2) Biology. In each subject laboratory work is included, but the two parts can be taken separately. For neither can the candidate present himself until after matriculation and a period of approved work in the respective subjects.

The Second Examination.—The Second Examination consists of: Part I, Organic Chemistry; Part II, Materia Medica and Practical Pharmacy; Part III, Anatomy and Physiology; Part IV, Pharmacology. Candidates will be allowed to pass any parts separately.

The Final Examination.—The Final Examination consists of: Part I, Pathology and Bacteriology; Part II, Medicine, Surgery, Obstetrics, Gynaecology, and Clinical Pathology; Part III, Forensic Medicine, Public Health, and Therapeutics. Part I may be taken at the end of the second clinical year, and must be passed before Parts II and III are taken. Parts II and III may be taken at the end of the third clinical year but not before the completion of the fifth year of medical study. If taken separately Part II must be passed before Part III.

M.D.—A candidate for this degree must be a M.B., Ch.B. of the university of at least one year's standing. He presents a dissertation embodying the results of personal

observation or original research, and, if this is approved, he may be required to write a short extempore essay on some topic connected with medicine, and may be examined orally on the dissertation or other work submitted.

Ch.M.—The candidate for this degree must have been admitted to the M.B., Ch.B. of the university not less than a year previously, and during that time must have held for at least six months a surgical appointment in a public institution affording full opportunity for the study of practical surgery. He must also have attended certain courses, including one on ophthalmology and one on bacteriology; he is then examined on the subject of surgery in all its branches.

FEES.

The matriculation fee is £2, and on readmission £1 10s. For each of the other examinations £6 and £6 on readmission; Ch.M. £10 and same on readmission; M.D. £10. On conferment of the degree of Ch.M. £5 is payable, and £5 for the M.D. degree.

UNIVERSITY OF LIVERPOOL.

THIS university, besides granting degrees in medicine (M.B. and M.D.) and in surgery (Ch.B., M.Ch.Orth., and Ch.M.), gives degrees in dental surgery (B.D.S. and M.D.S.), a degree in hygiene (M.H.), and degrees in veterinary science (B.V.Sc., M.V.Sc., and D.V.Sc.). Diplomas are awarded in dental surgery (L.D.S.), tropical medicine (D.T.M.), tropical hygiene (D.T.H.), public health (D.P.H.), veterinary hygiene (D.V.H.), and medical radiology and electrology (D.M.R.E.). The degree of Doctor of Philosophy (Ph.D.) may also be taken in the Faculty of Medicine.

MATRICULATION.

The Matriculation Examination is governed by the Joint Matriculation Board, 315, Oxford Road, Manchester, which accepts, under certain conditions, the tests of several other bodies as its equivalent. Chemistry and physics are essential pre-registration subjects.

PROFESSIONAL EXAMINATIONS.

Candidates for the M.B., Ch.B. degrees have three examinations to pass, the first including (1) chemistry, (2) physics, (3) biology (zoology and botany).

Second M.B.—This test covers (*a*) (1) anatomy, (2) physiology, including physiological chemistry and histology; and (*b*) (3) elementary bacteriology, (4) clinical chemistry, (5) general pathology. Candidates may present themselves in (*a*) and (*b*) separately.

Final M.B.—The subjects of the Final Examination are: (*a*) (1) special pathology and morbid anatomy, (2) forensic medicine and toxicology, (3) public health, (4) pharmacology and general therapeutics; (*b*) (5) obstetrics and diseases of women, (6) surgery—systematic, clinical, operative, and practical—including ophthalmology, (7) medicine—systematic and clinical—including therapeutics, mental diseases, and diseases of children. Candidates may take Parts (*a*) and (*b*) separately, but Part (*b*) may not be taken until five years of study have been completed.

M.D. and Ch.M.—Candidates for these degrees must have received the M.B. and Ch.B. at least two years previously. Students holding equivalent degrees of other approved universities may become candidates for the M.D. degree after two years' study in the university or clinical school of the university. The M.D. candidate submits for approval a thesis covering original work in some branch of medicine or some science directly relative to medicine, together with, if desired, copies of published work; if the thesis is not judged to be of special merit an examination in either Medicine or some subject connected with the thesis is required. The M.Ch. candidate undergoes an examination. Other information concerning the diplomas of this university and its medical school will be found on page 409.

FELLOWSHIPS, SCHOLARSHIPS, AND EXHIBITIONS.

The university awards Fellowships annually to students of distinguished merit, as follows:

(1) John Rankin Fellowships in Anatomy; two, each of the value of £120, tenable for two years. (2) Ethel Boyce Fellowship in Gynaecology, value £100 and tenable for one year, open to fully qualified medical students of either sex. (3) John W. Garrett International Fellowship in Bacteriology, value £100 and tenable for one year. (4) Robert Gee Fellowship in Human Anatomy, value £100 and tenable for one year. (5) Holt Fellowships in Physiology and Pathology, two in number, value £150 each and tenable for one year. (6) Johnston Colonial Fellowship in Biochemistry, value £100 and tenable for one year. (7) Thelwall Thomas Fellowship in Surgical Pathology, value £150 and tenable for one year. (8) Lady Jones Fellowship in Orthopaedic Surgery, one, value £200, offered every two years.

There are, in addition, scholarships and exhibitions open to medical students.

VICTORIA UNIVERSITY OF MANCHESTER.

THIS university grants the four ordinary degrees in medicine and surgery—M.B. and Ch.B. and M.D. and Ch.M.; a degree and diploma in dental surgery; a diploma in public health; a certificate in factory and in school hygiene; a diploma in psychological medicine; and a diploma in bacteriology. Candidates for degrees must pass the special Matriculation Examination prescribed by the Faculty of Medicine (or some equivalent examination accepted in lieu thereof; see the prospectus of the Joint Matriculation Board), and study at the university itself for at least two years of the six years' curriculum, subsequent to the passing of the First M.B. Examination. The Matriculation Examination comprises (1) Latin, (2) mathematics, (3) the English language, its literature and history, (4) mechanics, (5) one subject at choice as approved by the Joint Board. It is held in July and September.

PROFESSIONAL EXAMINATIONS.

M.B., Ch.B.—There are four examinations for this degree. They must be passed in proper order, and before admission to them the candidate must be duly certified as having attended in the subjects involved. The First M.B. is divided into Part 1, chemistry and physics; Part 2, biology—(*a*) botany, (*b*) zoology. The parts may be taken separately or together. At the Second M.B. the candidate is examined in anatomy (including histology) and physiology; at the third in pathology and pharmacology (including materia medica and practical pharmacy). The Final Examination, under new regulations, is divided into two parts, which may be taken separately. Part I consists of (*a*) forensic medicine and toxicology, and (*b*) hygiene and preventive medicine. Part II consists of (*a*) medicine, including dermatology, diseases of children, and mental diseases; (*b*) surgery, surgical pathology, and diseases of the ear, nose, and throat; (*c*) obstetrics and gynaecology.

M.D.—A candidate for this degree must be a bachelor of medicine of at least one year's standing. He has a choice between presenting an original dissertation or undergoing a written (as well as practical and clinical) examination in medicine, and a written and practical examination in pathology, and one other subject selected by himself.

Ch.M.—A candidate must have held, since becoming Ch.B., and for not less than twelve months, a post in a public institution affording opportunity for the study of the branch of surgery in which examination is desired. The examination in Branch I comprises the general field of surgery; Branch II, obstetrics and gynaecology; Branch III, ophthalmology; Branch IV, otology, laryngology, and rhinology.

B.Sc. and M.Sc.—The ordinary degree of B.Sc. in the Schools of Anatomy and Physiology may be obtained by students in medicine who in their third year of study for the degree of M.B., Ch.B. complete the additional courses in these subjects prescribed for this degree. Candidates for the Honours degree of B.Sc. in Anatomy or Physiology who are students in medicine are required to attend courses in advanced anatomy and physiology for four terms after passing the Second Examination for the degrees of M.B., Ch.B. Graduates in science of this university, of not less than one year's standing from the date of their graduation as Bachelors, may proceed to the degree of M.Sc. by the presentation of an approved thesis on some subject coming within the scope of the Faculty of Science.

FEES.

The following examination fees are payable: Matriculation, £2; on readmission £2. Each M.B. examination, £8 8s.; on readmission, £3 3s. M.D., including the conferring of the degree, £15 15s. Ch.M., £10 for the examination and £10 10s. for conferment of degree. Application for further information should be addressed to the Dean of the Medical School.

UNIVERSITY OF SHEFFIELD.

THE degrees of this university (M.B., Ch.B., M.D. and Ch.M., B.D.S., and M.D.S.), the diploma in public health, and the diploma of licentiate in dental surgery, are open to candidates of either sex. Candidates for a degree must have matriculated in the university or have passed such other examination as may be recognized for this purpose, and have passed the further examination in chemistry and physics.

PROFESSIONAL EXAMINATIONS.

A candidate for the degrees of M.B., Ch.B. must produce certificates that he will have attained the age of 22 years by the day of graduation; that he has pursued the courses of study required by the university regulations during not less than five years subsequent to the date of his matriculation or exemption from matriculation, and the passing of the further examination in chemistry and physics, three of such years at least having been passed in the university, one at least being subsequent to the passing of the First Examination. The following examinations must be passed in due order.

First Examination.—The subjects are chemistry, physics, and biology. Candidates who have passed the Intermediate Examination of the Faculty of Pure Science in any or all of the subjects of the First M.B. Examination will, on payment of the fee for the latter examination, be deemed to have passed it when they have passed in such subjects as they did not take for the Intermediate B.Sc. Examination. Candidates on presenting themselves for this examination are required to furnish certificates of having attended for not less than one year approved courses of instruction, after matriculation, and the passing of the further examination in physics and chemistry, in (i) chemistry, inorganic and organic; (ii) physics; (iii) biology.

Second Examination.—The subjects are anatomy and physiology. The candidate must have completed the second year of professional study, must have passed the First Examination, and must have attended (1) courses on anatomy, including lectures and practical anatomy, during one year; (2) courses on physiology, including lectures and practical physiology, during one year.

Third Examination.—The subjects are pathology and pharmacology, anatomy, and physiology. Candidates must have completed the Lent term of the fourth year of medical study and the requisite courses in these subjects, including *post-mortem* clerkship for three months.

Final Examination.—The subjects are: Part I, forensic medicine and public health; Part II, medicine (including mental diseases and diseases of children), surgery, obstetrics (including gynaecology). Candidates for Part I must have completed Michaelmas term of the fifth year of study; candidates for Part II must have completed the fifth year of study.

M.D.—Candidates for the degree of Doctor of Medicine must have passed the examination for the degrees of M.B., Ch.B. at least one year previously, must present a thesis embodying observations in some subject approved by the Professor of Medicine, and must pass an examination in the principles and practice of medicine.

Ch.M.—Candidates for the degree of Master of Surgery must have passed the examination for the degrees of M.B., Ch.B. at least one year previously, and must, since taking the degrees of M.B., Ch.B., have held for not less than six months a surgical appointment in a public hospital or other public institution affording full opportunity for the study of practical surgery. The subjects of examination are systematic, clinical, and operative surgery, surgical anatomy, surgical pathology, and bacteriology.

Other information concerning this university will be found in the section devoted to Provincial Medical Schools.

UNIVERSITY OF WALES.

THE Charter and statutes of the University of Wales provide *inter alia* for a Faculty of Medicine and for the granting of the following degrees: Bachelor in Medicine (M.B.), Bachelor in Surgery (B.Ch.), Master in Surgery (M.Ch.), and Doctor in Medicine (M.D.).

A candidate for the M.B., B.Ch. is required to pursue a course of study of not less than six academic years subsequent to matriculation in the university, and of these years at least three must have been passed in one of the constituent colleges of the university. These are the University College of Wales, Aberystwyth; University College of North Wales, Bangor; University College of South Wales and Monmouthshire, Cardiff; and University College, Swansea. He must also hold an arts or science degree of the University of Wales, or of some other university approved for this purpose. Certain of the courses of study pursued for a B.Sc. or a B.A. degree may be counted as courses required for the degrees in the Medical Faculty.

The courses for the M.B., B.Ch. are divided into two sections, of which the first includes the preliminary subjects—physics, chemistry, botany, zoology; and the ancillary subjects—organic chemistry, human anatomy, and physiology. Study of the preliminary subjects and of organic chemistry must extend over at least one academic year; study of physiology and anatomy must extend over at least two academic years; the first section of the course must occupy not less than three years. The second section includes courses in pathology, bacteriology, pharmacology, hygiene and forensic medicine, medicine, surgery, and obstetrics and gynaecology, and cannot be commenced, except in the case of pharmacology, until the examinations relating to the preliminary and ancillary courses have been passed. Examinations in all the subjects are held in June of each year.

The university also offers courses of study in public health and in tuberculosis. Candidates for the Diploma in Public Health (D.P.H.) and for the Tuberculous Diseases Diploma (T.D.D.) must possess a medical qualification registrable for practice in Great Britain and Ireland, and must have completed courses of study as prescribed by the regulations either at the Welsh National School of Medicine, Cardiff or at another institution approved by the university.

WELSH NATIONAL SCHOOL OF MEDICINE.

Students can complete the whole of their curriculum in the Welsh National School of Medicine, which is an integral part of the University College of South Wales and Monmouthshire, and qualify for the degrees of M.B., Ch.B. in the university.

Further information may be obtained from the Registrar, the University Registry, Cathays Park, Cardiff.

English Medical Corporations.

THERE are in England three medical corporations which grant licences to practise—the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London. The first two combine for certain purposes to form what is known as the Conjoint Board in England. Details concerning this body, its component Colleges, and the third licensing body here follow.

THE CONJOINT BOARD.

THIS body—the Examining Board in England—deals with the qualifications of all candidates for the Licence of the Royal College of Physicians of London and for the Membership of the Royal College of Surgeons of England. It prescribes for them certain periods of study, and recommends those who pass the required examinations for the Licence and for the diploma of Member respectively. The successful candidate is then entitled to register as L.R.C.P.Lond., M.R.C.S.Eng. It performs the same task in connexion with diplomas in public health, tropical diseases, ophthalmic medicine and surgery, psychological medicine, and laryngology and otology—jointly issued by the two Colleges in question. Under the new regulations, which apply to all students who have not passed the required preliminary tests of general education before January 1st, 1923, every candidate for the L.R.C.P. and M.R.C.S. must (1) complete five years of professional study after passing a recognized preliminary examination and a recognized pre-medical

examination in chemistry and physics; (2) comply with the regulations, which may be had from the Secretary, Examination Hall, Queen Square, London, W.C.1; and (3) pass the two professional examinations of which particulars appear below. The old regulations for the Conjoint diploma, of which an account was given in the Educational Number for 1922, still apply to students who passed their preliminary examination in general education before January 1st, 1923.

NEW REGULATIONS FOR THE CONJOINT DIPLOMA.

The following is an outline of the regulations applicable to candidates for the L.R.C.P.Lond. and M.R.C.S.Eng. who passed the required Preliminary Examination in general education on or after January 1st, 1923. The full regulations and synopses and forms of certificate may be obtained from the Secretary.

PRE-MEDICAL EXAMINATION.

Students are required to pass a Pre-Medical Examination in Chemistry and Physics conducted by the Conjoint Examining Board before commencing the five years' curriculum of professional study or some other examination recognized by the Board—namely, the examination in Chemistry and Physics for the degree in Medicine of any university recognized by the Board, the Higher School Certificates of Oxford and Cambridge Universities and the Oxford and Cambridge Schools Examination Board, the Higher Certificates of London, Bristol, Durham Universities, the Joint Matriculation Board of the Northern Universities, the Central Welsh Board Higher Certificate, or the Pre-Medical Examination in Chemistry and Physics conducted by any of the Qualifying Bodies whose Degrees or Diplomas are registrable on the Medical Register.

A candidate must enter for Chemistry and Physics together and he will not be allowed to pass in one without obtaining at the same time at least half the number of marks required to pass in the other subject. He will be admitted to the examination on producing evidence of having passed the required Preliminary Examination in General Education and of having received instruction during 180 hours in Chemistry and 120 hours in Physics to the satisfaction of his teachers. These courses may be commenced or attended before the required Preliminary Examination in General Education is passed.

The examination is partly written, partly oral, and partly practical. A candidate rejected in one or both subjects of the examination will not be admitted to re-examination until after the lapse of a period of not less than three months, and he must produce evidence of further instruction in the subject or subjects of failure.

PROFESSIONAL EXAMINATIONS.

There are two Professional Examinations, called the First and Final Examinations. The courses of study for the First Examination may be commenced before the Pre-Medical Examination in Chemistry and Physics or some equivalent examination has been passed provided three terms of study of anatomy and physiology are completed after passing such examination.

First Professional Examination.—The subjects of this are: Section I, (*a*) Anatomy, including Histology and Embryology; (*b*) Physiology, including Biochemistry. Section II, Pharmacology, Practical Pharmacy, and Materia Medica. A candidate must have attended at a recognized Medical School courses of instruction in Anatomy, including Embryology, during five terms, during which he must have dissected the whole body, courses of instruction in Physiology, including General Biology, Biochemistry, and Biophysics during five terms, courses of instruction in Pharmacology, Practical Pharmacy, and Materia Medica. A candidate may present himself for the two sections together or separately, but he must take parts (*a*) and (*b*) of Section 1 together until he has passed in one or both parts, but a candidate will not be allowed to pass in one part unless he obtains at the same time at least half the number of marks required to pass in the other part. Section II of the examination may be passed at any time before the candidate enters for the Final Professional Examination. A candidate who produces satisfactory evidence of having passed an examination in the subjects of Section I or of either part of Section I and of Section II in the examination for the degree in Medicine conducted at a university recognized by the Board will be exempted from further examination in such subject or subjects.

Final Professional Examination.—The subjects of this are: Section I, Pathology (including Morbid Anatomy, Morbid Histology, and Clinical Pathology), and Bacteriology. Section II, Part I, Medicine, including Medical Anatomy, Forensic Medicine, and Public Health; Part II, Surgery, including Surgical Anatomy and the use of Surgical Appliances; Part III, Midwifery and Gynaecology. The examination is partly written, partly practical, partly clinical, and partly oral. A candidate may take Sections I and II and the three parts of Section II of the Final Examination separately or may take the whole examination together. He will be required to produce the certificates prescribed by the regulations before being admitted to the respective parts of the examination. A candidate who produces evidence of having passed an examination for a degree in Medicine in the subjects of Pathology and Bacteriology at a university recognized by the Board is exempted from Section I.

FEES.

The fee for the *Pre-Medical Examination* is three guineas, for re-examination in Chemistry two guineas, and for re-examination in Physics one guinea. The fee for the *First Professional Examination* is ten guineas, for re-examination after rejection in Section I six guineas, for re-examination after rejection in either part of Section I three guineas, for re-examination after rejection in Section II three guineas. The fee for admission to Section I of the *Final Professional Examination* is four guineas, for admission to Section II, Part I, ten guineas, Part II ten guineas, Part III six guineas; and the re-examination fees are respectively three guineas, six guineas, and four guineas.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THIS College has three grades—its Licentiates, its Members, and its Fellows. The Licence is now only issued through the Conjoint Board. The Membership is only granted to those who have passed the final examinations for the Licence, or those who are registered practitioners and graduates of a recognized university; in any case they must be persons over 23 years of age. Candidates are examined in pathology and the practice of physic, partly in writing and partly viva voce; they are also examined in Latin, Greek, French, and German. The languages are not compulsory, but credit is given to those who show a knowledge of them. The fee for the Membership is £42, or in the case of a Licentiate £21. There is a fee of £8 8s., payable before entrance to the examination, which in the case of successful candidates is reckoned as part of the Membership fee. The body of Fellows is maintained by election from among the Members.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THIS College has two grades—Members and Fellows. The Members are admitted as stated in the section dealing with the Conjoint Board. The Fellowship is granted after examination to persons at least 25 years of age who have been engaged in professional studies for six years. There are two examinations for the Fellowship—the first in anatomy and physiology, which may be passed after the third winter session; the second, chiefly directed to surgery, which may be passed after six years of professional study. Candidates must pass the Final Examination of the Examining Board in England and be admitted Members of the College before admission to the Second Examination for the Fellowship, except in the case of graduates in medicine and surgery of not less than four years' standing of universities recognized by the College for the purpose, who are required to attend for one year the surgical practice of a general hospital recognized by the College after obtaining their degrees.

Fees.—At first examination, £8 8s.; for re-examination, £5 5s. At second examination, £12 12s. Admission fee £10 10s. for members, £31 10s. for non-members.

SOCIETY OF APOTHECARIES OF LONDON.

THIS body confers a registrable diploma in medicine, surgery, and midwifery, now known as the L.M.S.S.A. (Licentiate in Medicine and Surgery of the Society of Apothecaries), on those successful at the following examinations:

Primary Examination.—This is divided into two parts, of which Part I includes chemistry, chemical physics, practical chemistry, and materia medica and pharmacy. Part II includes anatomy, physiology, and histology, and cannot be passed before the completion of twelve months' practical anatomy with demonstrations. Candidates will be excused any or all the subjects of the primary examination on producing evidence that they have passed equivalent examinations before an examining body recognized by the Society. Candidates referred in anatomy will be required to produce evidence of further work in the dissecting room before being admitted to re-examination.

Final Examination.—This is divided into three parts. Part I includes clinical surgery, the principles and practice of surgery, surgical pathology, operative manipulation, surgical anatomy, instruments and appliances. Part II includes clinical medicine: (*a*) the principles and practice of medicine (including therapeutics, pharmacology, and prescriptions), pathology, and morbid histology; (*b*) forensic medicine, hygiene, theory and practice of vaccination, and

mental diseases. Part III includes midwifery, gynaecology, and diseases of newborn children, obstetric instruments and appliances.

The fee for the primary examination is £5 5s.; for the final, £15 15s. The regulations and synopses relating to the several examinations, and other information, may be obtained from the Secretary, Court of Examiners, Apothecaries' Hall, Blackfriars, E.C.4.

The Scottish Universities.

THERE are in Scotland four universities, each possessing a faculty of medicine, and having the right to confer degrees which admit the holder to the *Medical Register*. In essential points the regulations in their medical faculties for undergraduates are much alike, so that a general account can be given of all of them together.

The universities are those of Edinburgh, Glasgow, Aberdeen, and St. Andrews. The provision each of the cities in which these universities are situated makes for the education of medical students will be found in the section on Medical Schools in Scotland; here it need merely be said that degrees in medicine from Scotland as a whole have always enjoyed a high repute.

The degrees granted in medicine and surgery to candidates of either sex are four in number—Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.). The two former are not obtainable one apart from the other. Besides these degrees a diploma in tropical medicine and hygiene is obtainable from the University of Edinburgh, as also diplomas in psychiatry, public health, and radiology. As for public health, registrable degrees in this subject are granted by the University of Glasgow, while diplomas in public health may be obtained from the universities of St. Andrews and Aberdeen.

The conditions for admission of graduating students of medicine are the same as those in the Faculties of Arts or Science (for degrees in pure science).

As from January 1st, 1923, prospective medical students are also required to pass a pre-registration examination in chemistry and physics.

PROFESSIONAL EDUCATION.

The regulations comply in all respects with the requirements and recommendations of the General Medical Council, and, in addition, necessitate definite study for stated periods of diseases of children, of the larynx, ear, and nose, of the skin, of ophthalmology, and of mental diseases. In respect of the various courses certificates must be obtained showing that the student has not only attended regularly, but has duly performed the work of the class. Out of the necessary five years of medical study, not less than two must be spent at the university whose degrees the student hopes to obtain, and the balance at any place officially recognized for such purpose. In each academic year there are two sessions—one lasting from the beginning of October to the middle of March, and the other from the middle of April to the beginning of July.

PROFESSIONAL EXAMINATIONS.

The distinctive feature of the Scottish curriculum is that though nominally there are only four examinations, each of these may be, and habitually is, split up by the student into sections. Hence, a student may complete some stage of his career during the course of nearly every session. Thus, by the end of the first winter session the student may pass in zoology and chemistry. At the end of the first summer session he can finish with botany and physics, and with anatomy and physiology at the end of the second. Pathology and materia medica he will pass at the end of the third year, and so on, until the final examination in midwifery, surgery, and medicine, and the corresponding clinical subjects, at the end of the fifth year of study. At each examination the candidate may pass "with distinction," and a record is kept of the merit displayed, so that, when the time comes for the candidate to graduate, one who has done well throughout can be declared as graduating with honours. A further point in the system is that the student's own teachers commonly take some part in his examination.

Of the four examinations, the first deals with physics, botany, zoology, and chemistry; the second with anatomy and physiology; the third with materia medica and pathology; the fourth with medicine and surgery (clinical and systematic), midwifery, clinical midwifery, and clinical gynaecology, and forensic medicine and public health. The first three examinations are held three times a year; the final twice a year.

Exemption from the first professional examination can be obtained by candidates who have passed an arts, science, or medical degree examination in its subjects at any recognized university. When a candidate presents himself for an examination in several of its parts, but is not successful in all of them, he is credited at the next examination with those subjects in which he has already been approved.

THE HIGHER DEGREES.

It is open to those who are already M.B., Ch.B. to proceed either to the M.D. or the Ch.M. A candidate for the former must have been engaged for not less than one year in work in the medical wards of a hospital, or in scientific research in a recognized laboratory, or in the Naval or Military Medical Services, or have been at least two years in general practice, and he must be 24 years of age. He has to write a thesis on any subject not exclusively surgical, and is examined in clinical medicine and in some one or other of its special departments. The regulations for candidates for the Ch.M. are of a corresponding character, a period of surgical work in a hospital or elsewhere being substituted for medical work, and the thesis being on a surgical rather than a medical subject. He is examined in surgical anatomy, clinical surgery, operative surgery, and in some of the special departments of surgery.

FEES.

It is estimated that the class, examination, and other fees for the M.B., Ch.B. come altogether to about £256, the separate examination fees included in this calculation being as follows:

	£	s.	d.
First Professional	9	9	0
Second Professional...	7	7	0
Third Professional	6	6	0
Final	11	11	0

Re-entry in any subject in which the candidate has failed entails a fresh payment of £1 1s. Candidates for the M.D. and Ch.M. pay £21, and on re-entry £5 5s.

More detailed information with regard to the University of Edinburgh can be obtained from the *Medical Programme*, price 6d., which is published by Mr. Thin, 55, South Bridge, Edinburgh, or on application to the Dean of the Faculty of Medicine. Similar information about Glasgow should be sought from the Assistant Clerk, Matriculation Office, Glasgow. With regard to Aberdeen, application may be made to the Secretary of the Medical Faculty, Marischal College. In respect of St. Andrews information can be obtained either from the Secretary of the University, or, alternatively, the Secretary of the United College, St. Andrews, or the Secretary of University College, Dundee, these being the two constituent colleges of the University of St. Andrews.

Finally, it should be mentioned that in connexion with all the Scottish universities there are valuable bursaries and scholarships, some information as to which will be found in the article on Medical Schools.

THE CARNEGIE TRUST.

The following is a summary of the regulations made by the Carnegie Trust for the Universities of Scotland for assistance in the payment of class fees in the universities and extra-mural colleges of Scotland.

Applicants must be over 16 years of age; they must be of Scottish birth or extraction, or have attended for two years, after the age of 14, at a school or institution under inspection of the Scottish Education Department. Applicants so qualified who have been pupils of schools under the Scottish Education Department will be eligible for assistance in the payment of class fees if they have obtained the leaving certificate of the Department, provided that it bears evidence of such preliminary education as is required by the universities for their graduating curricula, or that it has

been supplemented by such passes either in the Scottish Universities Preliminary or other examination as will satisfy the above requirement of the universities. Where applicants have not been pupils of schools under the Scottish Education Department, or where other good ground for not having obtained the leaving certificate can be shown, the Executive Committee has power to accept instead what it deems equivalent evidence of attainments.

Applicants in the Faculties of Arts and Science must have had their course of study for each academic year approved by the University Adviser of Studies, and they must have passed the graduation examinations belonging to the previous stage of their curriculum before becoming eligible for assistance in the payment of fees of classes belonging to a further stage. Beneficiaries must submit to the Executive Committee at the end of each session particulars as to their attendance and work, any distinctions gained, and any graduation examinations passed.

The annual allowance towards payment of class fees offered to beneficiaries by the Trust in the Faculty of Medicine is £19 for four years, in all £76. Any unexpended part of a grant will be carried forward to the succeeding year. In combinations of Faculties the allowances available for beneficiaries are: Arts and Medicine—two Arts grants of £8 and four Medicine grants of £19, in all £92; Science and Medicine—two Science grants of £17 and four Medicine grants of £19, in all £110.

Applicants, in writing for application forms, must name the university and faculty in which they intend to study, and state whether they have previously obtained the benefits of the Trust. Applications must be lodged not later than October 25th for the winter session, or May 10th for the summer session. Payments are made by means of fee coupons, and fees already paid are not refunded.

The Scottish Corporations.

THERE are three medical corporations in Scotland—the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow. Their licences can be separately obtained only by persons who are already in possession of a recognized qualification—in surgery in the case of the College of Physicians, and in medicine in the case of the College of Surgeons and the Faculty of Physicians and Surgeons of Glasgow. All others must submit to the examinations held by the Conjoint Board which the three corporations have combined to form. Details concerning this Board and its component colleges follow. The conditions on which their higher qualifications are granted will be found set forth separately in connexion with each corporation.

THE CONJOINT BOARD IN SCOTLAND.

THIS body has charge of all questions connected with candidates for the Conjoint Licences of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow. Those finally approved by it are entitled to registration and to the initials denoting the Licences of the three bodies concerned—namely, L.R.C.P. Edin., L.R.C.S.Edin. and L.R.F.P.S.Glas. The Board requires all candidates to comply with the regulations of the General Medical Council. It has an Arts examination of its own, but is prepared to accept in its place any of the other educational tests approved by the General Medical Council. All candidates must obtain registration with the General Medical Council.

Professional Curriculum for Candidates registered as Medical Students prior to January 1st, 1923.

Subsequent to registration as a medical student the candidate must pass not less than five years in medical study, each comprising a winter and a summer session. The Board does not insist that candidates shall pursue their study at any particular place, and is prepared to accept certificates of having attended the necessary courses from any recognized medical school.

Its examinations are four in number, each of them being held four times every year, and these will fall to be held twice in Edinburgh and twice in Glasgow during the next period; it is open to candidates to present themselves for examination at either place. The first examination deals with physics, chemistry, and elementary biology; the second with anatomy and physiology, including histology; the third with pathology and materia medica, including pharmacy; and the final with (1) medicine, including therapeutics, medical anatomy, and clinical medicine; (2) surgery, including surgical anatomy, clinical surgery, and diseases and injuries of the eyes; (3) midwifery and diseases of women and of newborn children, including clinical gynaecology and practical midwifery; and, if it has not been passed previously, (4) medical jurisprudence and hygiene. Candidates will also be examined on diseases of children, diseases of the ear and throat, insanity, vaccination, etc.

These examinations must be passed in due order, and before admission to any of them the candidate must supply certificates showing that he has completed the due periods of study of their subjects. He can present himself in any single subject of the first three examinations. As regards the final examination, a candidate can present himself in medical jurisprudence and hygiene at any time after completion of the third examination and of his study of these subjects; but in medicine, surgery, and midwifery he cannot present himself until the completion of five years' study, and he must take them all simultaneously. A candidate who takes up several subjects of an examination or the whole of the subjects at one time, but fails in some of them, is credited at the next examination with those subjects in which he has been approved.

All candidates for the Final Examination must complete the pass in the three portions (medicine, surgery, and midwifery) within a period of nineteen months.

Part or entire exemption from the first three examinations may be granted to those who have already passed before other bodies examinations deemed by the Board equivalent to its own, but all candidates for the Conjoint licence must sit for the Final Examination and at no examination can a candidate present himself within three months of his rejection by some other licensing body.

Professional Curriculum for Candidates registered as Medical Students after January 1st, 1923.

The curriculum has been extended to meet the recommendations of the General Medical Council. Candidates, when applying for copies of regulations, should state date of medical registration.

FEES.

It is estimated that the total cost of lectures and fees for the Conjoint licence is about £152. The separate examination fees are as follows: First, Second, and Third Professional, £5 each; Final £15. On re-entry for any of the first three examinations £3, and on re-entry for the Final, £5. If the re-entry is only in one or two subjects of the First, Second, or Third Examinations the fees are smaller.

Information concerning this Board should be sought either from Mr. D. L. Eadie, 49, Lauriston Place, Edinburgh, or from Mr. Walter Hurst, Faculty Hall, 242, St. Vincent Street, Glasgow.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THIS College has three grades—Licentiateship, Membership, and Fellowship—all of which are open to men and women. The regulations applying to candidates for the Licentiateship have already been generally indicated. If desirous of receiving it apart from those of the other two corporations they must be holders of a surgical qualification recognized by the College, and must pass an examination corresponding to the medical part of the Final Examination of the Conjoint Board, and conditioned in the same way, and also an examination in materia medica. The fee for examination is 15 guineas, a special examination being obtainable on due cause being shown, and on payment of 5 guineas extra. Ordinary examinations take place monthly on the first Wednesday and Thursday, except in September and October. Candidates for the Membership must be either Licentiates of a British or Irish College of Physicians, or alternatively graduates of medicine of a university, approved by the Council, and in either case not less than 24 years of age. Candidates are examined in medicine and therapeutics, also on one or more departments

of medicine specially professed, and approved by the Council, in which a high standard of proficiency will be expected. The fee to be paid by a candidate for the Membership is £36 15s. The examination is held quarterly, and application for admission to it must be made a month previous to its date. For the Fellowship the candidate must have been a Member of the College for at least three years, and, if accepted, pay fees, including £25 stamp duty, amounting altogether to £64 18s. Further details can be obtained on application to the Secretary of the College.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THIS College has two grades—its Licence and its Fellowship. Licentiates may be of either sex, and for the Fellowship women are eligible also.

Licence.

As an original qualification the Licence is only granted after fulfilment of the regulations of the Conjoint Board, but as an additional qualification it can be obtained by those already possessed of a registrable or equivalent qualification in medicine. In this case the candidate has to pass a written, oral, and clinical examination in surgery and surgical anatomy, and may be asked to operate on the dead body.

The fee is £15 15s., of which £10 10s. is returned to unsuccessful candidates. On due cause being shown, a special examination may be granted, the fee being £20, of which £10 is returned to a candidate if he is not approved.

Fellowship.

Candidates for the Fellowship must be not less than 25 years of age, and have been in the practice or study of their profession subsequent to registration for at least two years, and must hold either a surgical degree from a university recognized for that purpose by the College, or a registrable diploma obtained as the result of an examination which includes surgery as well as medicine and midwifery. Candidates are examined in (*a*) the principles and practice of surgery, including surgical anatomy, (*b*) clinical surgery, and (*c*) one optional subject, which they may choose from among the following: surgical pathology and operative surgery, ophthalmology, laryngology, otology and rhinology, gynaecology, obstetric surgery, anatomy, and dental surgery and pathology. The examination is written, oral, and clinical or practical. A candidate who desires to be examined must give one month's notice, his application for admission being supported by two Fellows of the College, one of whom must be resident in Edinburgh, or, in default, by testimonials specially obtained for the purpose. *Candidates are not allowed to appear more than three times at the examinations.*

Licentiates of the College pay £35, and others £45. For further information application should be made to the Clerk of the College, Mr. D. L. Eadie, 49, Lauriston Place, Edinburgh.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

THIS body possesses two classes—Licentiates and Fellows. The regulations applying to the former correspond with those respecting candidates for the Licence of the Royal College of Surgeons of Edinburgh. Candidates for the single Licence are examined in surgery (including clinical surgery and surgical anatomy). The fee is £15 15s. and examinations are held quarterly. Candidates for the Fellowship must be qualified medical men of not less than two years' standing and 24 years of age. Candidates approved at this examination are then eligible for election as Fellows. The Faculty can also elect four Fellows annually without previously submitting them to examination, provided they "have highly distinguished themselves in medical science or practice." They must be of not less than ten years' standing and 40 years of age.

The fee for the Fellowship is £50. Further information can be obtained from Mr. Walter Hurst, Faculty Hall, 242, St. Vincent Street, Glasgow.

Irish Universities and Corporations.

MEDICAL REGISTRATION IN THE IRISH FREE STATE.

THE Medical Practitioners Act, 1927 (Irish Free State), provides for the establishment of a Medical Registration Council for the Irish Free State. The main functions of the Council will be (1) to keep a register of medical practitioners who may desire to practise permanently or temporarily in the Irish Free State, and (2) to exercise disciplinary power with regard to all medical practitioners who are on the register and engaged in practice in the Irish Free State. The first schedule of the Act contains the agreement between Great Britain, the Irish Free State, and Northern Ireland. This agreement provides for the nomination of a member of the General Medical Council, formerly made for Ireland by His Majesty on the advice of the Privy Council, to be made henceforth by His Majesty in Council on the recommendation of the Governor of Northern Ireland. The nominations of members of the General Medical Council by universities and medical corporations in Ireland and the election of a member of the General Medical Council by registered medical practitioners in Ireland will be in all respects the same as heretofore. The constitution of the General Medical Council and of the several Branch Councils as formerly existing under the Medical Acts and the powers of holding qualifying examinations and granting diplomas for the purpose of registration in the general *Register* formerly vested in certain universities and medical corporations in Ireland are not affected by the establishment of the Irish Free State or of Northern Ireland, and for the purpose of the preparation and keeping of the general *Register* the General Medical Council and the Branch Council for Ireland shall have the same powers and jurisdictions under the Medical Acts as they exercised formerly. The agreement provides also that any person who is or shall be registered in the general *Register* shall be entitled on the payment of a prescribed fee to be registered in the *Irish Free State Register*, but this fee will not be payable by any person who, on the date of the establishment of the *Irish Free State Medical Register*, is registered on the general *Register*. Then follow provisions with regard to the erasure from the *Register* of the name of a person on account of misconduct.

THE IRISH UNIVERSITIES.

THERE are three universities in Ireland, each with a medical faculty. These are, in the Irish Free State, the University of Dublin (usually known as Trinity College, Dublin), and the National University of Ireland; and, in Northern Ireland, the Queen's University of Belfast.

UNIVERSITY OF DUBLIN: TRINITY COLLEGE.

THIS university grants two degrees in medicine (M.B. and M.D.), two in surgery (B.Ch. and M.Ch.), two in midwifery (B.A.O. and M.A.O.), and a post-graduate diploma in public health. It also grants post-graduate diplomas in gynaecology and obstetrics, for which nine months' study is required, and in psychological medicine, for which twelve months' study is required. The degrees are granted to those who, having passed the Professional Examination, have also graduated in arts.

PROFESSIONAL EXAMINATIONS.

A candidate for the Final Examination for the M.B., B.Ch., and B.A.O. degrees must be a matriculated student of at least five years' standing. The examinations which students must pass are the Preliminary Scientific, the Intermediate Medical, and the Final. Before admission to any of these examinations students must have completed the courses of study in the subjects involved.

Preliminary Scientific.—This covers (*a*) chemistry, (*b*) physics, (*c*) botany and zoology; the three divisions may be taken together or at different times.

Intermediate Medical.—This is divided into two parts: (*a*) anatomy, physiology, organic chemistry, and histology; (*b*) applied anatomy and applied physiology. The two parts may be taken separately or together.

Final Examination.—Part I: Hygiene and medical jurisprudence, pathology and bacteriology, materia medica and therapeutics. Part II: (*a*) Midwifery and gynaecology; (*b*) medicine and mental diseases; (*c*) surgery in all branches, including clinical ophthalmology. The three sections of Part II may be taken separately or together. In either case the full curriculum must have been completed, and the Final Examination cannot be completed before the end of the fifth year.

M.D.—The candidate must have passed all the qualifying examinations in medicine, surgery, and midwifery, and have taken, or have been qualified to take, the degree of B.A. three years previously. He must send in a thesis for approval. Subsequently the Regius Professor of Physic and an assessor will discuss with him questions connected with the thesis, and may also examine him viva voce on other medical subjects of a more general nature.

M.Ch.—The candidate must be a B.Ch. of not less than three years' standing, and have been engaged in practice for two years.

M.A.O.—The candidate must be a B.A.O. of not less than two years' standing and must produce satisfactory evidence of having been engaged for two years in obstetric science. The examination is specially directed to obstetrics and practical gynaecology.

Further information regarding courses of instruction, etc., may be obtained from the Registrar of the School of Physic, Trinity College, Dublin.

QUEEN'S UNIVERSITY, BELFAST.

THE degrees granted by the Medical Faculty of this university are as follows: Bachelor of Medicine (M.B.), Bachelor of Surgery (B.Ch.), Bachelor of Obstetrics (B.A.O.), Doctor of Medicine (M.D.), Master of Surgery (M.Ch.), Master of Obstetrics (M.A.O.). The university also confers a Diploma in Public Health. The first three degrees mentioned serve as a qualification for admission to the *Medical Register*, and are not granted separately. In addition to matriculating and passing his professional examinations, a candidate for these degrees must have passed three of the regulation five years as a student at the Belfast School of Medicine. Degrees in dental surgery (B.D.S. and M.D.S.) are conferred by the university, and also a diploma in dental surgery (L.D.S.).

PROFESSIONAL EXAMINATIONS.

The examinations for the M.B., B.Ch., B.A.O. are four in number. The first deals with: (1) inorganic, organic, and practical chemistry, (2) experimental and practical physics, (3) botany and practical botany, (4) zoology and practical zoology. It is divided into two parts, of which botany and zoology form one. The Second Examination covers anatomy and physiology (both theoretical and practical), and may be taken at the end of the second year of the student's career. The Third Examination includes: (1) pathology and practical pathology, (2) materia medica, pharmacology, and therapeutics, (3) medical jurisprudence, and (4) hygiene. To be valid a certificate in regard to the study of the subjects of this examination must show that the work has been done after the Second Examination has been passed.

The Final Examination includes: (1) medicine, (2) surgery, (3) midwifery, (4) ophthalmology and otology. The student may pass in all subjects at once at the end of his fifth year, or he may divide the examination into two parts—namely, (1) systematic, (2) clinical, practical, and oral. The first part may be taken at the end of the fourth year, but for the second part the candidate may not present himself until the end of his fifth year, but students invariably take both parts at the end of their course. No certificate in regard to the study of the subjects of this examination will be valid unless the work was done subsequent to passing in all the subjects of the Second Examination.

THE HIGHER DEGREES.

Candidates for the degree of Doctor of Medicine must be graduates in medicine of at least three years' standing, unless they hold also a degree of the university in arts or science, in which case a standing of two academic years will suffice. Moreover, candidates must be able to show that the interval has been passed in the pursuit of such courses of study or practical work as may be prescribed. The degree may be conferred either (*a*) after a formal examination, or (*b*) in recognition of the merits of a thesis or of some piece of original study or research carried out by the candidate, followed by an oral or other examination in its subject. When an ordinary examination is imposed it will include (1) a written paper on the principles and practice of medicine, (2) a commentary on a selected clinical case, (3) a clinical and viva voce examination, and (4) a written paper and clinical or practical and viva voce examination on a subject chosen from the following list: (*a*) human anatomy, including embryology; (*b*) physiology, (*c*) pathology, (*d*) pharmacology and therapeutics, (*e*) sanitary science and public health, (*f*) forensic medicine and toxicology, (*g*) mental diseases. The regulations for the degrees of M.Ch. and M.A.O. are of the same general nature.

NATIONAL UNIVERSITY OF IRELAND.

THE National University of Ireland carries on most of its educational work through three constituent colleges—one in Dublin, one in Cork, and one in Galway. Each of these provides a full medical curriculum, and all candidates for the medical degrees of the university must pass three of their five years of study at one or other of them. These years do not count except after matriculation or recognition as a student of the Medical Faculty obtained in some other fashion. The candidates at each constituent college are examined by the university, and a common standard of education is secured by all courses of instruction and the regulations concerning them having to be approved by the Senate, after considering report thereon from the Board of Studies of the university. In addition to the ordinary degrees in medicine and surgery, the university grants those of Bachelor and Master of Obstetrics, Bachelor and Doctor of Science in Public Health, and Bachelor and Master in Dental Surgery, as well as Diplomas in Public Health, in Mental Diseases, and in Tropical Medicine.

Application for other information may be made to the Registrar, National University of Ireland, Dublin.

THE IRISH CORPORATIONS.

THERE are, in the Irish Free State, three licensing bodies other than the Medical Faculties of the universities; and in Dublin, just as in London, there is a Royal College of Physicians of Ireland, a Royal College of Surgeons in Ireland, and an Apothecaries' Hall. In Dublin, as in London and in Edinburgh, the two Colleges have formed an examining Conjoint Board, which is responsible for the recommendation of candidates to the two bodies for their respective licences. The Apothecaries' Hall of Ireland, like the Apothecaries' Society of London, gives its licence separately.

THE CONJOINT BOARD IN IRELAND.

THIS body requires of candidates the passage either of its own preliminary examination in the subjects of general education or proof that the candidate has passed one of the tests accepted by the General Medical Council as well as passing in the Pre-Registration Examinations in Chemistry and Physics and Biology.

PROFESSIONAL EXAMINATIONS.

There are three professional examinations, the first of which cannot be passed earlier than the end of the second winter session, nor the final before the conclusion of full five years of medical study. Before being admitted to any of them the candidate must show that he has studied the different subjects in practice and theory for the requisite

periods, certificates to this effect being accepted from the authorities of most of the recognized medical schools at home and abroad. The first examination deals with (*a*) anatomy, and (*b*) physiology and histology. The second examination deals with (*a*) pathology, (*b*) materia medica, pharmacy, and therapeutics and ophthalmology, and may be taken separately.

Final Examination.—This is divided into three divisions, which cannot be completed until at least five years have passed in medical studies other than those for the Pre-Registration Examinations, and five years at least since the beginning of the curriculum. The divisions are: (*a*) medicine, including fevers, mental diseases, and diseases of children; (*b*) surgery, including operative surgery; (*c*) midwifery, including diseases of women and newborn children, and the theory and practice of vaccination.

Fees.—**Preliminary Examination, £2 2s. Re-examination, £2 2s. Pre-Registration Examination, £3 3s. Re-examination in Chemistry, £2 2s.; in Physics, £1 1s. First Professional Examination, £26 5s.; Second, £15 15s.; Final, £6 6s. Re-examination fee is £2 2s. for each division.**

Diploma in Psychological Medicine.

There are two examinations in connexion with this diploma: Part I consists of (*a*) anatomy and physiology of the nervous system, (*b*) psychology. Part II—(*a*) neurology, including clinical and pathological neurology; (*b*) psychological medicine, including its legal relationships.

Fees.— £3 3s. for each part.

Further information can be obtained from Mr. Alfred Miller, Secretary of the Committee of Management, Royal College of Surgeons, St. Stephen's Green, Dublin.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

The Diploma in Public Health.

Every candidate for the Diploma in Public Health must observe the following rules:

Rule 1. A period of not less than two years shall elapse between the attainment by a candidate of a registrable qualification in Medicine, Surgery, and Midwifery and his admission to the Final Examination for a Diploma in Public Health.

Rule 2. The curriculum for the Diploma in Public Health shall extend over a period of not less than twelve calendar months subsequent to the attainment of a registrable qualification.

Rule 3. Every candidate shall produce evidence of having attended, during a period of not less than five months, at an institution approved by the Licensing Body granting the Diploma, practical instruction in—

(*a*) Bacteriology and Parasitology (including Medical Entomology), especially in their relation to diseases of man, and to those diseases of the lower animals which are transmissible to man;
(*b*) Chemistry and Physics in relation to Public Health;
(*c*) Meteorology and Climatology in relation to Public Health.

At least 180 hours must be devoted to Course (*a*), of which not less than 150 hours shall be occupied in practical laboratory work.
At least 90 hours must be devoted to Course (*b*), of which not less than 70 hours shall be occupied in practical laboratory work.
At least 10 hours must be devoted to Course (*c*).

Rule 4. Every candidate shall produce evidence of having received, during not less than 80 hours, at an institution or from teachers approved by the Licensing Body granting the Diploma, instruction in the following subjects:

(*a*) The Principles of Public Health and Sanitation (30);
(*b*) Epidemiology and Vital Statistics (20);
(*c*) Sanitary Law and Administration (including Public Medical Services) (20);
(*d*) Sanitary Construction and Planning (10).

[The numbers indicate the normal proportion of time to be given to each subject.]

Rule 5. Every candidate shall produce evidence that he has attended for three months on the clinical practice of a recognized Hospital for Infectious Diseases, and has received therein instruction in the methods of administration. At least thirty daily attendances of not less than two hours in each week shall be required.

Rule 6. Every candidate shall produce evidence that he has, during a period of not less than six months, been engaged in acquiring a practical knowledge of the duties, routine and special, of Public Health Administration under the supervision of a Medical Officer of Health, who shall certify that the candidate has received, from this Officer or other competent Medical Officer, during not less than three hours on each of sixty working days, practical instruction in these duties, and also those relating to:

(*a*) Maternity and Child Welfare Service;
(*b*) Health Service for Children of School Age;
(*c*) Venereal Diseases Service;
(*d*) Tuberculosis Service;
(*e*) Industrial Hygiene;
(*f*) Inspection and Control of Food, including meat and milk.

Certificates of having received the prescribed instruction in Public Health Administration must be given by a Medical Officer of Health who devotes his whole time to Public Health work; or by the Medical Officer of Health of a Sanitary Area having a population of not less than 50,000, or in Ireland the Medical Superintendent Officer of Health of a County or County Borough having a population of not less than 50,000.

Rule 7. The examination for the Diploma shall be divided into two parts, Part I and Part II.

Rule 8. The examination for Part I shall include the following subjects:

Bacteriology and Parasitology (including Medical Entomology);
Chemistry and Physics, and Meteorology and Climatology, in relation to Public Health.

Rule 9. The examination for Part II shall include the following subjects:

Hygiene and Sanitation (including Sanitary Construction);
Epidemiology and Infectious Diseases;
Sanitary Law and Vital Statistics;
Public Health Administration.

The examination shall be written and oral, and shall include practical examinations in Infectious Diseases; Food inspection; Inspection of premises—dwellings, factories, workshops, schools, etc.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THOSE whose names already appear on the *Medical Register* can obtain the separate Licence in Medicine of this College, and its Licence in Midwifery. In either case an examination has to be passed in the subjects indicated, questions on midwifery, hygiene, and jurisprudence being included in the examination for the Licence in Medicine. For the Licence in Midwifery practitioners of over five years' standing are exempted from examination by printed questions. The other grades of the College are Members and Fellows. The former are admitted after an examination which is open to all university graduates in medicine and Licentiates in medicine of the Royal Colleges of Physicians, and deals with the general subjects of medicine. Fellows are selected, by vote, from among the Members of the College.

Fees.—For the Licence in Medicine, 15 guineas; Special Examination, £21. For the Licence in Midwifery, 8 guineas; Special Examination, 16 guineas. For the Membership, 20 guineas to a Licentiate of the College, 35 guineas to others; a special examination costs 10 guineas extra. The Fellowship, £35, in addition to stamp duty, £25.

Information as to special examinations and other matters can be obtained from the Registrar, the Royal College of Physicians, Kildare Street, Dublin.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THIS body, besides granting a Licence in Surgery, admits those possessed of registrable surgical qualifications to its Fellowship under certain conditions. Its Licence is usually granted conjointly with that of the College of Physicians, but it is given separately to holders of a registrable qualification in medicine, provided the College is satisfied that adequate courses of study have been pursued, and provided its own provisional examination is passed. This examination is held on its behalf by the Conjoint Board, and is identical with the ordinary surgical portion of the examinations imposed by that body.

The Fellowship.—Candidates for the Fellowship must pass two examinations, of which the first is in anatomy (including dissections), physiology, and histology; and the second in surgery (including surgical anatomy) and pathology. Both examinations are partly written, partly practical, and partly viva voce; while the final examination includes the performance of operations. All subjects of either examination must be passed at one time, and in neither can a candidate be admitted who has been rejected in any of its subjects by any other licensing body within three months. Candidates are not admitted to the Primary Examination except on evidence that they have already passed an examination in anatomy, physiology, and histology, held by some university or other body whose degrees or licences entitle the holder to admission to the *Medical Register*; if, however, the candidate's name is on the Colonial or Foreign List in the *Medical Register*, at the discretion of the Council. Candidates for the final examination must be over 25 years of age, produce a certificate of general good conduct signed by two or more Fellows of the College, and, if successful, must make a declaration before admission to the effect that they do not conduct dispensing practices, and will not do so as long as they are Fellows.

Fees.—Candidates for the Licence pay 5 guineas for examination, which sum, if they pass, is counted as part of the fee payable on admission to the Licence, this being 25 guineas. Candidates for the Fellowship pay 5 guineas for each examination, the total of 10 guineas being reckoned as part of the fee payable on admission to the Fellowship. That fee is 25 guineas in the case of those who are already Licentiates, and 40 guineas in the case of others.

APOTHECARIES' HALL OF IRELAND.

A DIPLOMA is granted by this Hall which entitles the holder to be registered as a practitioner of medicine, surgery, and midwifery, and confers also the privileges of an apothecary. Women candidates are eligible.

Fees.—Primary Examination (Parts I and II), £21; Final Examination, £21. Subjects of examination: Primary, Part I, Anatomy and Physiology. Primary, Part II, Materia Medica, including Pharmacy; Medical Jurisprudence and Hygiene; Pathology. Final Examination: Medicine, Surgery, and Midwifery. Candidates must enter for and pass at the one time in Anatomy and Physiology. They are at liberty to enter for the subjects of the Final Examination at separate times, but the Final Examination cannot be completed until a period of three years has elapsed from the date of passing Primary Examination, Part II.

Application for other information should be made to the Registrar, 95, Merrion Square, Dublin.

MEDICAL SCHOOLS AND COLLEGES.

LONDON.

INFORMATION as to the fees at each of the various metropolitan medical schools, and the scholarships, prizes, and junior appointments which they offer, will be found in the following pages. The courses they provide are fundamentally the same, and in all of them the arrangements made are such as to meet the requirements of students of every class—of those who are aiming at the diplomas of the English Conjoint Board or the Apothecaries' Society, not less than of those who have London or other university degrees in view. At all, too, special facilities are offered to students who have commenced their professional education at Oxford or Cambridge, and are seeking the medical degrees of those universities.

CHARING CROSS HOSPITAL.

THIS school, with its hospital, is situated in the centre of London, and is easily accessible. Primary and intermediate students attend lectures and practical work at King's College. The final studies are taken in the school and hospital, where systematic lectures, demonstrations, and tutorial classes are arranged to cover all the subjects necessary for the qualifying examinations. Departments are also available for the other final subjects of bacteriology, clinical pathology, biochemistry, materia medica, public health, operative surgery, and for research work. An Institute of Pathology, with a whole-time staff of scientific workers and fully equipped laboratories, has been established in the school. Students receive their training in preventive medicine, pathology, and bacteriology here, and are encouraged to undertake research.

Women students are admitted to the school and hospital upon the same terms and conditions as men, and after qualification are eligible for resident hospital appointments.

Fees.—The fees are as follows:—Entrance: Primary and Intermediate, 10 guineas; Final, 8 guineas. Annual, £40.

Further information may be obtained on application to the Dean of the Medical School, Charing Cross Hospital, London, W.C.2.

GUY'S HOSPITAL.

THE hospital contains 642 beds in constant occupation. Twenty-six beds are set apart for diseases of the eye, and 43 for the most urgent and interesting medical cases, which form the subjects of the weekly clinical lectures. There are special wards of 47 beds for the reception of cases of diseases of women and for cases of difficult labour. Beds are also allotted to the throat and ear departments, the departments of orthopaedics, neurology, and dermatology, the department for the treatment of diseases of the genito-urinary system, and the children's department; there are also some special beds for the treatment of syphilis.

The residential college fronts the east gate of the hospital, providing accommodation for resident students. This contains a dining hall, reading rooms, a library of general literature, and a gymnasium for the use of the residents and of the members of the Clubs' Union. The athletic ground at Honor Oak Park is reached from the hospital in twenty minutes. The Gordon Museum of Pathology, the Wills Library, the departments of chemistry, physics, pathology, and pharmacology, and the school buildings in general, afford opportunities for a liberal education and for research, and provide the full curriculum for a medical qualification. New departments of anatomy, physics, and biology have recently been completed. They are equipped on modern lines, and provide ample accommodation for teaching and research. Special classes are held for the First and Second Examinations for medical degrees of the University of London, for the Pre-Medical Examination, and for the First and Final F.R.C.S.Eng. Special teaching is provided to meet the requirements of the Universities of London, Oxford, and Cambridge in general pathology and pharmacology.

Appointments.—All appointments are made according to the merits of the candidates, as determined by a committee of the medical staff. Sixteen out-patient officers, eight house-physicians, twenty assistant house-surgeons, eight house-surgeons, four ophthalmic house-surgeons, two genito-urinary house-surgeons, two house-physicians (children's department), and nine resident obstetric assistants are appointed annually. The house-physicians and house-surgeons, obstetric residents, ophthalmic house-surgeons, and genito-urinary house-surgeons hold office for six months each, and receive free board and lodging in the college. Every student is provided with rooms and commons in the hospital during the period of his "take in" as senior dresser. In addition to the clerkships and dresserships in the medical and surgical wards, students are appointed to the posts of clinical assistant, dresser, or clerk in the special departments of ophthalmology, laryngology, gynaecology, diseases of children, diseases of the nervous system, dermatology, otology, actinotherapeutics, anaesthetics, dentistry, orthopaedics, vaccine, tuberculosis, fractures, and genito-urinary and venereal disease; clinical assistantships in the various special departments are open to post-graduates.

Scholarships, Prizes, etc.—The following scholarships in Arts and Science are awarded. A. Open Junior Scholarships: (1) An Arts Scholarship of the value of £100, (2) a Science Scholarship of the value of £100; these are awarded annually in June or July. (3) A War Memorial Scholarship of the value of £200, awarded alternately in Arts and Science. This scholarship is open every other year; the next award will be made in July, 1928 (in Arts). B. Confined Scholarship in Science. A Junior Science Scholarship of the value of £100 is offered for competition annually in June or July to candidates who have attended the preliminary science classes at this school. Candidates for these scholarships (male students only) must be under 20 years of age on August 1st of the year of the competition. C. Open Senior Science Scholarships: (1) A War Memorial Scholarship of the value of £100, (2) an Open Scholarship of the value of £80; both of these are awarded annually in September. Full particulars as to the scholarships may be obtained from the Dean of the Medical School. Junior prizes for general proficiency, £20, £15, £10; Hilton prize for Dissection, £5; Michael Harris prize for Anatomy, £10; Sands-Cox Scholarship for Physiology, £15 for three years; Wooldridge Memorial prize for Physiology, £10; Beaney prize for Pathology, £34; Treasurer's gold medal in Medicine, Treasurer's gold medal in Surgery, and the Golding-Bird gold medal and scholarship for Bacteriology (£20), are awarded annually after competitive examination. The Gull Studentship in Pathology of the value of £250 per annum, the Beaney Scholarship in Materia Medica, of the annual value of about £50, and the Anderson Demonstratorship in Clinical Chemistry, value £150 per annum, are awarded without examination to enable research to be carried on in these subjects. An Arthur Durham Travelling Scholarship of £100 is awarded triennially. The Griffiths Demonstratorship in Pathology of the value of £320 per annum, and the Hilda and Ronald Poulton Fellowship, value £150 per annum, are awarded without examination.

An annual composition fee is paid by all students until a registrable qualification is obtained. Further information may be obtained from the Dean of the Medical School, Guy's Hospital, London Bridge, S.E.1.

KING'S COLLEGE HOSPITAL.

THE medical school of this hospital, which is situated at Denmark Hill, deals with the final examination subjects of the medical curriculum. The hospital was opened in 1913, and is one of the most modern and best equipped in England. The number of attendances in the casualty and out-patient departments during the year 1926 amounted to 223,053. In the education at the hospital a special feature has always been the individual attention given to each student. The studies are co-ordinated under the direction of senior members of the honorary staff, assisted by medical, surgical, obstetric, and pathological tutors.

There are special departments for diseases of women and children, nervous diseases, ophthalmology, otology, laryngology and rhinology, dermatology, radiology, and physical treatment. The laboratory and pathological department are specially noteworthy.

Appointments.—Sixteen resident medical and surgical officers are appointed half-yearly, as well as dressers and clerks in the wards, out-patient departments, *post-mortem* rooms, and special departments. Each of the special departments has several clinical assistants. There are three registrars and four tutors, all of whom receive salaries. The Clubs and Societies Union combines athletics, music, and other societies connected with the school, and provides also a common room.

Scholarships, etc.—At entrance: Science Scholarship, £50. At commencement of Final Studies: Anatomy and Physiology Scholarship, £50; Pathology and Pharmacology Scholarship, £50; two Raymond Gooch Scholarships, each £60 a year for two years; two Burney Yeo Scholarships, each £80 (for Oxford and Cambridge students); Epsom College Scholarship, £50; Senior Scholarship, £40; Todd Prize, Tanner Prize, Class Prizes and Medals.

Fees.—The composition fee is 93 guineas if paid in one sum. Entrance fee of 10 guineas includes membership of the Clubs and Societies Union.

New Dental School.—This school was opened in October, 1923, and provides complete courses for dental degrees and diplomas. The director of dental studies is Dr. A. Livingston, M.B., Ch.B., M.D.S., L.D.S.

The calendar of the school can be obtained on application to the Dean, H. Willoughby Lyle, M.D., F.R.C.S., or to the Secretary of the Medical School, S. C. Ranner, M.A., King's College Hospital, Denmark Hill, S.E.5.

THE LONDON HOSPITAL.

THIS hospital, with its medical college and dental school, is situated in the Mile End Road, E.1. The hospital contains 849 beds, which are in constant use. During 1926, 18,077 patients passed through the wards and 129,247 out-patients received treatment. Of the latter number, 42,478 received treatment in the departments for diseases of the ear, nose, throat, eye, skin, and teeth, and in the pediatric, orthopaedic, venereal, radiological, electro- and physico-therapeutical, and inoculation departments. The number of major operations which were performed amounted to 7,873.

The hospital presents, therefore, a large field for clinical instruction, and in its wards and out-patient and special departments exceptional opportunities are afforded for acquiring an extensive and practical experience of all phases of disease.

A clinical unit in medicine, under the charge of a whole-time director, assisted by an assistant director, two assistants, and two house-physicians, provides for the more elaborate methods of diagnosis and treatment, and takes a leading part in the initiation and co-ordination of medical research. To each medical and surgical firm throughout the hospital there is attached a first assistant, who is responsible for instructing the clerks or dressers of the firm in elementary medicine and surgery, and who assists the honorary members of the firm in the preparation of their demonstrations. In the department of obstetrics and gynaecology there are two assistants and two resident accoucheurs. Special courses of lectures and demonstrations are arranged in medicine and surgery and in their ancillary subjects. Opportunities for research are provided under the supervision of the staff.

All the departments are modern and adapted for the teaching of all subjects in the various curricula. Special courses of instruction are held in preparation for the examinations of the University of London, for the Fellowship of the Royal College of Surgeons, and for the Membership of the Royal College of Physicians. Special entries can be made for the medical and surgical practice of the hospital. Two resident hostels are provided for the convenience of students. Recent additions to hospital and college buildings include the Dunn Clinical Laboratories, the Bearsted Clinical Theatre, the Bernhard Baron Pathological Institute, and a hostel for resident medical officers providing accommodation for forty residents. The athletic ground, of over thirteen acres, is at Higham's Park, and is open to all members of the Clubs Union.

Appointments.—The salaried appointments open to past students of the hospital are those of assistants to the medical unit; first assistants to the medical and surgical firms; obstetric registrar; assistants to the department of obstetrics and gynaecology; medical, surgical, and obstetric tutors; clinical assistants in the medical, surgical, ophthalmic, aural, light and skin, orthopaedic, and electrical departments, and in the Pathological Institute. There are appointed annually 4 resident accoucheurs, 14 resident house-physicians and 22 resident house-surgeons, 14 resident receiving-room officers, 8 resident emergency officers, 8 clinical assistants to the medical out-patient department, and 16 clinical assistants to the surgical out-patient department, also paid and unpaid clinical assistants in the various special departments. In addition, there are numerous assistantships, clerkships, and dresserships in the departments of medicine, surgery, gynaecology, and obstetrics.

Scholarships and Prizes.—The following is a list of scholarships and prizes:—At Entrance: Price Scholarship in Science, £100. Scholarships open to students of Oxford and Cambridge Universities: (1) £75, Anatomy and Physiology; (2) £100, Pathology. Entrance Scholarship in Science, £50; Epsom Scholarship, "Free Medical Education." After Entrance: Buxton Prize in Anatomy and Physiology, £40; Letheby Prizes in Organic Chemistry and Chemical Pathology, £25; Prizes in Clinical Medicine, Surgery, and Obstetrics and Gynaecology, £20 each; Duckworth Nelson Prize in Practical Medicine and Surgery, £10; Hutchinson Prize in Clinical Surgery, £60; Treves Prize in Clinical Surgery, £15; Sutton Prize in Pathology, £20; K. E. D. Payne Research Scholarship in Pathology, £20; Sir Andrew Clark Prize in Clinical Medicine and Pathology, £14; T. A. M. Ross (prox. acc.) Prize in Clinical Medicine and Pathology, £10 10s.; Anderson Prizes in Elementary Clinical Medicine, £20; Dressers' Prizes, £40; Practical Anatomy Prizes, £10; Arnold-Thompson Prize in Medical and Surgical Diseases of Children, £15; Liddle Prize, £120; Francis Farmer Scholarship in Dental Surgery, £25; Harold Fink Prize in Dental Surgery, £8 8s. The "London" prizes in Dental Surgery and Pathology, £5 5s., and in Dental Prosthesis, £5 5s. Seven class examination prizes, each of the value of £3 3s., are offered for competition at the end of the courses of lectures in the dental curricula. Funds to the value of over £90,000 permit of financial assistance being given to students and graduates engaged in medical research.

Fees.—Entrance fee, 20 or 15 guineas, according to examinations passed; annual fee, 40 guineas.

Full information may be obtained from the Dean at the London Hospital Medical College, Mile End, E.1.

THE MIDDLESEX HOSPITAL.

THE school and hospital are in Mortimer Street, W.1, close to Oxford Circus, Goodge Street, and Great Portland Street stations. There are a gymnasium, common rooms, and restaurant within the hospital precincts, and an athletic ground within easy reach. The hospital contains over 450 beds, including a wing containing 92 beds for patients suffering from cancer. There are special wards for maternity and gynaecological cases, for mental cases, for cases of venereal disease, and for diseases of children and of the skin and eye.

The medical school, which includes the Bland-Sutton Institute of Pathology and the cancer research laboratories, is completely equipped for teaching the entire medical curriculum, including the pre-medical subjects, chemistry, physics, and biology. The Bland-Sutton Institute, under the charge of the Professor of Pathology, contains large pathological and public health laboratories, a separate department of biochemistry, and smaller rooms for original investigation as well as a pathological and anatomical museum. Bacteriological, chemical, and microscopical examinations of material from the wards, operating theatres, and out-patient departments are carried out in the laboratories, and senior students are eligible for clerkships in connexion with this work. Junior assistants in the pathological and bacteriological laboratories are elected annually from recently qualified students. Every facility is given for original research. The cancer research laboratories offer unrivalled opportunities for the study of this disease, in both its clinical and pathological aspects.

Appointments.—Twenty-two resident appointments are open annually for competition among students of the hospital. The officers reside and board in the residential college free of expense. Two casualty medical and two casualty surgical officers, and two resident officers to the special departments, are appointed annually. Eight house-

surgeons are appointed every year at intervals of two months, after examination; six house-physicians are also appointed annually at similar intervals. An obstetric and gynaecological house-surgeon is appointed every six months. Nine registrars are appointed annually. In the out-patient departments the appointments are: clerk and dresser to the physicians and surgeons to out-patients; clerk in the departments for diseases of the skin and nervous diseases; dressers to the department for diseases of women, to the ophthalmic surgeon, to the throat and ear department, and to the dental surgeon. Extern midwifery clerks and *post-mortem* clerks are also appointed. The appointments are so arranged that every student may, during his course, hold all the out-patient and in-patient clerkships and dresserships. Students must have held an out-patient clerkship and dresserships before holding in-patient clerkships or dresserships. Non-resident qualified clinical assistants are appointed in the medical, surgical, skin, neurological, ophthalmic, throat and ear, odontological, children's and electro-therapeutic out-patient departments.

Scholarships.—There are two Entrance Scholarships, value £100 each. Two annual Entrance Scholarships, of the value of £90 and £60 respectively, are open to students of the universities of Oxford and Cambridge who have completed the curriculum for, or passed the examinations in, anatomy and physiology. Students joining the school in the previous April are eligible. The Freer Lucas Scholarship is annually awarded on the nomination of the headmaster to a pupil of Epsom College who has passed the first examination for medical degrees (Preliminary Scientific Examination). There is also a scholarship, value £50, awarded annually to students from New Zealand. In addition to the Entrance Scholarships, there are numerous other valuable scholarships, prizes, and exhibitions open to students of the hospital, including the Brodrip Scholarships, value £60 and £40; Lyell Gold Medal and Scholarship, value £55 5s.; Freeman Scholarship, value £30; John Murray Gold Medal and Scholarship, value £25; Hetley Clinical Prize, value £25; Leopold Hudson Prize, value 11 guineas; and the Second Year's Exhibition, value 10 guineas.

The rebuilding of the hospital is being carried out without the loss of a single bed, or any disorganization of its clinics.

Fees.—(*a*) Pre-medical students: For one year or less, £21. (*b*) Students who have completed the Preliminary Science course: Entrance fee, 25 guineas; five annual fees of £45. The annual fee for further attendance at the medical school, if a registrable qualification has not been obtained, is £23. Three-quarters, one-half, or one-quarter of the last annual fee may, at the discretion of the School Council, be returned if the student obtains a registrable qualification within three, six, or nine months of the annual payment becoming due. (*c*) Oxford and Cambridge and other students who have completed the Intermediate course: Entrance fee, 15 guineas; two annual fees of £45; further annual fees as above. These fees are inclusive and cover the cost of instruction in vaccination, fevers, etc., and also the subscription to the amalgamated clubs and hospital journal.

Further information may be obtained from the Dean or the School Secretary.

ST. BARTHOLOMEW'S HOSPITAL.

THIS institution fills one side of Smithfield and Giltspur Street, covering the greater part of a large island of ground separated practically from all other buildings; it is on the edge of the City, and easily reached from all parts of London. The hospital contains 757 beds. Extensive buildings, opened in July, 1907, occupy part of the ground acquired from the old Bluecoat School, and these materially enhance the attractions of the hospital as a place of medical study. The medical school buildings, including the library, the museum, and the chemical, biological, and anatomical departments, have now at their side a very large building, which includes club rooms for the Students' Union, a writing room, luncheon and dining halls, new quarters for the resident staff, and an out-patient department and accommodation for special departments of such large size as to be unsurpassed by any hospital in the kingdom. During the year 1909 a second block of new buildings was completed. These form the pathological department, and include, in addition to an extensive *post-mortem* room, large and well equipped laboratories for clinical pathology, pathological histology, bacteriology, and chemical pathology, altogether forming the most complete pathological department in the country. A further large block in Giltspur Street was acquired in 1923, and has been equipped by the construction of new lecture theatres and extensive laboratories for physics, chemical physiology, experimental physiology, histology, and pharmacology. The Students' Union owns grounds of some ten acres in extent for recreative purposes at Winchmore Hill, which is easily accessible from the hospital.

Special classes are held for students preparing for the Preliminary Scientific and other examinations, for the M.B., M.D. of the Universities of Oxford, Cambridge, and London, and for the higher surgical degrees at the same universities, including the M.Ch.Oxon., M.Chir.Cantab., M.S.Lond., and F.R.C.S.Eng.

Clinical Units.—Special clinical units have been established in medicine and surgery, each under the charge of a professor and director who devotes the whole of his time to the purpose of hospital practice, teaching, and research. In each unit there are an assistant director and four assistants, for whom special laboratory accommodation has been provided by a gift from the Sir William Dunn Trustees. The appointments of clerks and dressers are open to all students in these departments, and arrangements are made for all students to study in these units during a part of their clinical course.

Appointments.—Clinical clerks to the physicians and to the physician-accoucheur, and dressers to the surgeons and in the casualty department, are chosen from the students; clerks and dressers are also selected from the students to attend in the out-patient rooms, in the special departments (ophthalmic, orthopaedic, gynaecological, children's, laryngological, aural, dermatological, venereal, electrical and dental), and in the *post-mortem* room. Chief assistants and clinical assistants are selected from qualified men appointed yearly to help in the general medical, surgical, and in special departments. Ten house-physicians and ten house-surgeons are appointed annually. During their first six months of office they act as "junior" house-physicians and house-surgeons, and receive a salary of £80 a year. During their second six months they become "senior" house-physicians and house-surgeons, and are provided with rooms by the hospital authorities, and receive a salary of £80 a year. A resident midwifery assistant, an ophthalmic house-surgeon, a house-surgeon to the skin and venereal department, and a house-surgeon for diseases of the throat, nose, and ear are appointed every six months, and are provided with rooms and receive a salary of £80 a year. Three resident administrators of anaesthetics are appointed—the senior for one year at a salary of £150, and two juniors for six months with a salary at the rate of £80 per annum—and all are provided with board and rooms. An extern midwifery assistant is appointed every three months, and receives a salary of £80 a year.

Scholarships.—Four Entrance Scholarships are annually awarded after examinations held in September. The subjects of examination and conditions of eligibility for these scholarships are: (1) One scholarship, value £75, in not fewer than two and not more than three of the following subjects: chemistry, physics, botany, zoology, physiology, pathology, and anatomy, limited to students under 25 years of age who have not entered on the medical or surgical practice of any London medical school. (2) One scholarship, value £100, in not fewer than three of the following subjects: chemistry, physics, botany, zoology, and physiology, limited to students under 21 years of age who have not entered on the medical or surgical practice of any London medical school. (3) An entrance scholarship in arts, of the value of £100, in Mathematics; Latin or Greek, or French or German; a second language or Chemistry or Physics. (4) The Jeaffreson Exhibition in the same subjects as No. 3—of the value of £50. Candidates for Nos. 3 and 4 must be under 19 years of age. The total value of the scholarships and prizes is over £1,200 annually.

Further information and a handbook can be obtained on application to the Dean of the Medical College, St. Bartholomew's Hospital, E.C.1.

ST. GEORGE'S HOSPITAL.

THIS school is at Hyde Park Corner, and is carried on in connexion with St. George's Hospital, an institution having a service of 436 beds, of which 100 are at the convalescent hospital at Wimbledon. It provides for the instruction of its students in the preliminary and intermediate subjects of the curriculum at the teaching centre of London University established at King's College. The school at Hyde Park Corner is devoted entirely to the teaching of clinical subjects, great attention being paid by the members of the staff to individual teaching. A number of special courses are given, in which the requirements of university and all other examinations receive careful attention.

The St. George's Hospital Club consists of an amalgamation club, with smoking and luncheon rooms on the hospital

premises, and other students' clubs, with an athletic ground at Wimbledon. Students have the advantage of a well filled library of medical and scientific books. A register of accredited apartments and a list of medical men and others willing to receive St. George's men as boarders may be seen on application to the Dean.

Appointments.—Two house-physicians, two house-surgeons, and two casualty officers are appointed every two months. The house officers reside and board in the hospital free of expense. The casualty officers are non-resident, and receive salaries at the rate of £100 per annum. After the student has held a house appointment, the following are, among others, open to him: assistant resident physician at £350 per annum; assistant resident surgeon at £350 per annum; medical officer to the Atkinson Morley Convalescent Hospital at £300 per annum; medical registrarship at £200 per annum; surgical registrarship at £200 per annum; medical officer to the biochemical department at £100 per annum; assistant curatorship of the museum, £100 per annum; obstetric assistantship, resident, at £50 per annum; the post of resident anaesthetist at £100 per annum; the posts (three) of junior anaesthetist, each at £30 per annum.

Scholarships.—The following Entrance Scholarships and Exhibitions in anatomy and physiology and in general pathology are awarded in July to candidates who have passed the second M.B.London or corresponding examination: Senior William Brown Exhibition of the value of £150; Senior Scholarship of the value of 90 guineas; Junior William Brown Exhibition of the value of £80; Junior Scholarship of the value of £70; Devitt-Pendlebury Scholarship of the value of £50; and Exhibitions, each of the value of £40 and up to six in number. Other prizes to the value of £200 are awarded annually to the students of the hospital.

Fees.—First year (First M.B. or pre-medical course), £36 15s., second and third years, £42 each. For the course of clinical study, in the fourth and subsequent years, entrance fee, £10 10s.; annual composition fee, £42. No entrance fee is payable by St. George's students who have studied at King's College.

Further information may be obtained from the Dean of the Medical School.

St. Mary's Hospital.

THIS hospital and medical school are situated close to Paddington Station (G.W.R.), having on one side a poor district of 500,000 persons, and on the other side the residential district of Kensington and Bayswater. The hospital contains 288 beds, and extensions at present in progress will raise this number to 334 and provide two new operating theatres. By a scheme of affiliation, for teaching purposes, of several neighbouring hospitals, the teaching facilities extend over 1,000 beds. By arrangement with the Lock Hospital, students take the courses of instruction in venereal diseases there. The athletic ground (ten acres) is situated at Wembley, and can be reached in twenty minutes by a constant service of trains.

Clinical Facilities.—Clinical units in medicine and surgery were established in 1920, and have now been formally recognized by the University Grants Committee, St. Mary's being one of the six medical schools in London which enjoy this privilege. In addition to the lying-in beds at St. Mary's, every student attends a short course at Queen Charlotte's Maternity Hospital (which is situated near to St. Mary's) before holding a post on the maternity district of the hospital.

Institute of Pathology and Research.—Students specially interested in pathology and bacteriology have singular advantages at St. Mary's. The Institute comprises seven special departments, the whole being under the personal direction of Sir Almroth Wright, F.R.S. Research scholarships of £200 each are awarded annually to students working in the departments of the Institute; and research beds are provided. Clerkships in pathology and bacteriology and chemical pathology, lasting for a period of three months, are open to students of the fifth year, and enable them to carry out the pathological and bacteriological investigations of the wards, and learn the necessary technique under supervision. Seventy-two of these posts are available annually. Numerous appointments are open to newly qualified members of the medical school, including ten salaried posts, with salaries varying from £200 to £750 per annum.

Complete Curriculum.—The medical school provides complete courses of instruction, and students can join at once on passing a Preliminary Examination in Arts. Terms begin in October, January, and April.

Entrance Scholarships.—Two Entrance Scholarships of £210 each and one of £26 5s. are awarded annually in July by nomination on the lines of the Rhodes Scholarships. The Geraldine Harmsworth Scholarship (£200) and one or more University Scholarships of £200 are awarded annually in July.

Fees.—Composition fees for entire curriculum (5½ years), £200 in one sum, or £210 by five annual instalments. Composition fee for clinical curriculum (2½ years), 90 guineas in one sum, or 95 guineas by two annual instalments. As an alternative, students may pay an annual fee of 40 guineas, with an entrance fee of 10 guineas.

St. Thomas's Hospital.

THIS school and hospital are situated in Lambeth, on the south bank of the Thames, facing the Houses of Parliament, and form one of the well known architectural features of London.

The school buildings, which are separated from the hospital by a quadrangle, comprise lecture theatres, laboratories, and classrooms well adapted for the modern teaching of large bodies of students in the subjects of the medical curriculum. A splendid library and reading room and a complete museum are open to all students from 9 a.m. to 5 p.m., on Saturdays to 1 p.m. St. Thomas's House, the new Students' Club recently opened, comprises spacious dining and club rooms, etc., and provides accommodation for some sixty resident students. The terrace affords facilities for exercise and recreation. The sports ground, of more than nine acres in extent, is at Chiswick. It can be reached in forty minutes from the hospital; it is admirably adapted for football, cricket, lawn tennis, and athletic sports.

The hospital proper contains 644 beds. In addition to the ordinary provisions of a great hospital there are connected with the out-patient department physicians' and surgeons' rooms provided with ample sitting accommodation, so that students are enabled to follow closely the practice and teaching of the out-patient staff. There is a full complement of special departments, and connected with the hospital a special tuberculosis department gives opportunity for instruction of students. There is a clinical theatre, centrally situated, so as to facilitate the illustration of lectures by patients from the wards and out-patient room; it is arranged also for lantern demonstrations. The maternity ward, containing 21 beds, gives students full facilities for maternity training, under supervision, within the precincts of the hospital. This obviates any necessity for supplementary instruction elsewhere, and fully prepares the student for the extern maternity practice of the hospital district. The revised regulations of the examining bodies can thus be fully complied with.

Appointments.—All hospital appointments are open to students without charge. A resident assistant physician, a resident assistant surgeon, and a resident anaesthetist are appointed annually at a salary of £200 each per annum. Two hospital registrars, medical and surgical, at an annual salary of £250 each, are appointed yearly. The tenure of these offices may be renewed for a term not exceeding two years. A pathological registrar to the department of obstetrics and gynaecology (at an annual salary of £250), an ophthalmic registrar (at an annual salary of £50), and an orthopaedic registrar (unpaid) are appointed yearly. Ten resident casualty officers and anaesthetists (including two senior) are appointed every six months. Seven house-physicians (including two obstetric house-physicians and one house-physician to the department of diseases of children) and nine house-surgeons (including two ophthalmic house-surgeons, one orthopaedic house-surgeon, and two house-surgeons to the ear, nose, and throat department) are appointed every six months. Thirty-six or more clinical assistants in the special departments are appointed every three months, and hold office for six months if recommended for re-election. Clinical clerkships and dresserships to the in-patient and out-patient departments are available to the number of 400 each year.

Scholarships.—There are five Entrance Scholarships: two in arts, giving one year's free tuition; one of £150 and one of £80, in chemistry, physics, and biology, for students who have not received instruction in anatomy or physiology; one of £100 in any two of the following subjects: anatomy, physiology, chemistry, or

pathology, for students who have completed their examinations in anatomy and physiology, for a medical degree in any of the universities of the United Kingdom or the Colonies, and have not entered as clinical students in any London medical school. The money value and subjects of examination of the remainder are as follows: (*a*) William Tite Scholarship for second-year students, £25; (*b*) and (*c*) Musgrove Scholarship or (alternately) Peacock Scholarship, each for third-year students and tenable for two years, £35 each; (*d*) Mead Medal, Medicine, Pathology, and Hygiene; (*e*) Wainwright Prize, Medicine; (*f*) Toller Prize, Medicine; (*g*) Cheselden Medal, Surgery and Anatomy; (*h*) Clutton Memorial Medal in Clinical Surgery, biennial; (*i*) Beaney Scholarship, £50 biennially, Surgery and Surgical Pathology; (*j*) Solly Medal and Prize, biennially, Reports of Cases; (*k*) Sutton Sams Prize, biennially, Reports of Cases; (*l*) Bristowe Medal, Pathology and Morbid Anatomy; (*m*) Hadden Prize, Pathology and Morbid Anatomy; (*n*) Grainger Testimonial Prize, £31 10s., Anatomy and Physiology; (*o*) Louis Jenner Research Scholarship, tenable for two years, £60 annually, Pathology; (*p*) School Council Research Scholarship, £250 per annum; (*q*) John and Temple Research Scholarship, value £450 per annum (children).

Fees.—The annual fees are: For each year of study, £50. These fees cover all tutorial classes, but do not include instruction in infectious fevers, pharmacy, and vaccination. A limited number of qualified practitioners are permitted to attend the hospital practice on terms which may be ascertained from the Medical Secretary.

Special courses of instruction are given for various examinations, and a register of lodgings is kept at the school. Further information may be obtained from the Medical Secretary of the School, St. Thomas's Hospital, Albert Embankment, S.E.1.

UNIVERSITY COLLEGE HOSPITAL.

THE school, which forms part of the corporation of University College Hospital, is in immediate proximity to the hospital in University Street, and opposite University College. It comprises departments of medicine, surgery, midwifery and gynaecology, pathology including morbid anatomy, chemical pathology, biochemistry and bacteriology, cardiography, forensic medicine, mental physiology and mental diseases, dental surgery, practical pharmacy, and other departments for the study of special diseases, such as those of the eye, skin, ear and throat, venereal diseases, and for instruction in anaesthetics, electro-therapeutics, and skiagraphy. The Hospital and School have acquired the National Dental Hospital and College as their dental departments, thus providing every facility for the study of dental subjects. The Royal Ear Hospital has also been amalgamated as the Ear, Nose, and Throat Department, and a new hospital for in- and out-patients, close to University College Hospital, is completed.

The school thus provides the final course of study for the degrees of the Universities of Oxford, Cambridge, London, Durham, and other British universities, and for the diplomas of the Royal Colleges of Physicians and Surgeons in Medicine and Dental Surgery, and the Licence of the Society of Apothecaries. Special bacteriological classes are also held in preparation for the various diplomas in public health. Each department is also equipped for more advanced work, and provides facilities for research.

Clinical units in medicine, surgery, and obstetric medicine are now in operation. The whole-time directors of the units are concerned with the organization of the teaching generally, but the honorary staff is responsible for the largest share of the teaching in the wards and out-patient department of the hospital.

The new buildings of the obstetric hospital of 60 beds (rendered possible by the Rockefeller benefaction), the new Residents' House (with accommodation for 30 residents and students), the extension of the Nurses' Home, and the new research laboratories for the Medical School, are now finished and in full occupation.

Appointments.—The qualified appointments, in addition to a number of posts as house-physicians and house-surgeons and obstetric assistants, include the appointments of resident medical officer, medical registrar, surgical registrar, obstetric registrar, Harker Smith radium registrar, ophthalmic registrar, casualty medical officers, casualty surgical officers, assistants in ear, nose and throat, skin and venereal diseases departments, and house anaesthetists.

Scholarships.—The following scholarships and prizes are open to competition: Two entrance Exhibitions of 112 guineas each, awarded after a competitive examination in Anatomy or Physiology, or General Pathology, Radcliffe Crocker Travelling Scholarship in dermatology for one year, value about £280; the Graham Scholarship in pathology of a sum not exceeding £400 per annum; Leslie Pearce Gould Research Scholarship in surgery for one year, value about £200; the Atkinson Morley Scholarship of £45 a year for three years, awarded after examination in the theory and practice of surgery; the Atchison Scholarship of £55 a year for two years for general proficiency in medical studies; the Magrath Clinical Scholarship, value about £150; the Filliter Exhibition in pathology of £30; the Percival Alleyn Prize for the advancement of surgery by research, value about £75; the Graham Gold Medal for research work; four Fellows Medals in clinical medicine; Liston Medals in clinical surgery; the Bruce Medal in pathology and surgery; two Tuke Medals in pathology; and the Erichsen Prize for practical surgery.

Fees.—The fee for the full course of final studies at the school is 112 guineas if paid in one sum, or 115 guineas if paid in two instalments. Fees for vaccination, fevers, and pharmacy not included.

Particulars of general and special courses can be obtained on application to the Dean of the Medical School, University College Hospital, University Street, W.C.1.

WESTMINSTER HOSPITAL.

THIS school, with its hospital, situate in Broad Sanctuary, opposite Westminster Abbey, provides for the education of its students in the preliminary and intermediate subjects of the University of London at King's College. The rest of the work is done in the school buildings near the hospital. The number of in-patients averages 3,500 and out-patients upwards of 30,000 annually, and the hospital and school afford ample facilities for instruction in all branches of medicine and surgery.

Appointments.—A medical and surgical registrar are appointed annually, each with a salary of £150, and an obstetric registrar with a salary of £50. A senior resident and casualty officer, salary £104 per annum and board, appointed for six months, may be extended for a further period of six months. Three house-physicians, three house-surgeons, three assistant house-physicians, three assistant house-surgeons, and a resident obstetric assistant are appointed after examination, and are provided with rooms, commons, and salary of £52 per annum, except the assistant house-physicians and the assistant house-surgeons, who are provided with commons only. The assistant house-physicians, after three months' service, become house-physicians for a further period of six months, and the assistant house-surgeons, after three months' service, become house-surgeons for a further period of six months. Two house-anaesthetists are appointed for three months, non-resident, salary £50 per annum. Clinical assistants to the assistant physicians and assistant surgeons, and to the officers in charge of special departments, are appointed from among the qualified students. Every student must perform the duties of out-patient dresser for three months, and afterwards hold the office of in-patient dresser for three months. He is also required to serve two terms of three months each as medical clinical clerk to the in-patient physician and one term as gynaecological clinical clerk. Two pathological clerks are appointed every three months to assist in the *post-mortem* room. No student is eligible as an in-patient dresser or clinical clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination. Clerks and dressers in the special departments of hospital practice are periodically appointed. So far as vacancies permit, students of other hospitals are admitted to in-patients' dresserships or clerkships.

The governors of the hospital have now completed the extensive improvements and alterations to the hospital, which render it a still more efficient teaching institution, with an increased number of beds.

The athletic ground is situated at Tooting, and can be reached in twenty minutes from the hospital.

Scholarships.—The following open scholarships are offered for competition during the year 1927-28: In the winter session two scholarships in anatomy and physiology, £75 each. In the spring two scholarships in anatomy and physiology, £75 each. A certain number of scholarships have been allotted to universities of England, Wales, and the Colonies, and to public schools. These scholarships are awarded entirely on the nomination of the Principal of the university or school.

Fees.—The annual composition fee is £40. An entrance fee of 10 guineas is payable by all students—namely, primary and intermediate students, £10 10s.; students entering for the final subjects, £8 8s. These fees include subscriptions for membership of the Clubs Union.

Further information and a prospectus can be obtained on application to the Dean at the Westminster Hospital, Westminster, S.W.1

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

THE school is situated at 8, Hunter Street, Brunswick Square, W.C.1, close to the Royal Free Hospital. It is, like all the other London schools which have so far been mentioned, one of the constituent schools of London University. The laboratories are extensive and well lighted, and are fully equipped for the examination courses of the University of London and the Royal Colleges of Physicians and Surgeons. Research laboratories are attached to all departments. A large, well equipped library, common room, Union room, and refectory are provided for the use of students. Resident accommodation for 60 students is provided in students' chambers attached to the school.

The Royal Free Hospital, Gray's Inn Road, W.C.1, has 248 beds, all of which are available for clinical instruction. A new block contains the obstetrical and gynaecological unit, which controls 68 beds. A large maternity district is served from the unit with a separate maternity hostel in the Essex Road, Islington. There are separate departments for diseases of the eye, ear, and skin, children and infant welfare, venereal diseases, orthopaedic surgery, massage, light, electrical and *x*-ray work, dentistry, and casualty. The instruction given covers the full curriculum for the M.B., B.S. degrees of the University of London, including first medical courses. Students attend the practice of one of the fever hospitals of the Metropolitan Asylums Board and receive special instruction in lunacy at Bethlem Hospital; they are also admitted to the practice of a number of special hospitals, and hold clerkships and dresserships at the Elizabeth Garrett Anderson Hospital, the Cancer Hospital, the National Hospital for Nervous Diseases, the South London Hospital, and the Royal Ophthalmic Hospital. The work of the school includes preparation for the Primary Fellowship examination, and also for the Medical School and general hospital course for dental students.

Appointments.—Qualified students of the school can obtain appointments as house-physicians and house-surgeons, obstetric assistants, surgical, gynaecological, and medical registrars, assistant pathologists, assistant anaesthetists, medical electrician, skiagrapher, and clinical assistants and demonstrators in various subjects.

Scholarships.—The Isabel Thorne Entrance Scholarship, value £30, the St. Dunstan's Medical Exhibition, value £60 a year for three years, which may be extended to five years, the Alfred Langton Scholarship of £50 a year for two years, the Flora Murray Bursary of £50, and the Mabel Sharman-Crawford Scholarship, value £20 a year for four years, are offered for competition in each year. The Sir Owen Roberts Memorial Scholarship of the value of £75 a year for four years, the Mrs. George M. Smith Scholarship of the value of £50 a year for three years, which may be extended to five years, the Dr. Margaret Todd Scholarship of the value of £37 10s. a year for four years, and the Sarah Holborn Scholarship of the value of £20 a year for three years, which may be extended to five years, are awarded in alternate years. The School Jubilee Bursary of £50 a year for three years is offered every third year. The Bostock Scholarship, value £90 a year for two or four years, is awarded by the Reid Trustees on the result of an examination held in May by the University of London every fourth year. The holder of the scholarship must enter the London School of Medicine for Women. The Lieutenant Edmund Lewis and Lieutenant Alan Lewis Memorial Scholarship, of the value of £25 a year for four years, is awarded every fourth year. The John Byron Bursary of £20 a year for two years, the Julia Anne Hornblower Cock Prize of £60, the Helen Prideaux Prize of £60, the Mabel Webb Research Scholarship of £30 for two years, the Fanny Butler Scholarship of £16 a year for four years, together with many other scholarships and prizes, are offered on sundry conditions. The Dr. Edith Pechey-Phipson Post-Graduate Scholarship of £100 is awarded annually. Altogether the School offers annually £1,350 in scholarships. Various missionary societies also offer scholarships on certain conditions, and assist women who wish to go to India and other countries as medical missionaries.

Fees.—Courses for the University of London degrees and the diplomas of the Conjoint Board in England, and other qualifications: £240, payable in five instalments. These sums include library and laboratory fees.

The Students' Union exists to promote corporate action of the students on matters of common interest, to promote and maintain athletic and other clubs, and to issue a school magazine. All students are required to become members of the Union. The students' sports ground, which consists of a freehold property of seven and a half acres, is situated at Sudbury.

Further information can be obtained from the Warden and Secretary.

KING'S COLLEGE.

IN the Faculty of Medical Science instruction is given in the preliminary and intermediate subjects of the first and second examinations leading to the degree of M.B., B.S. of the University of London, of the corresponding examinations of other universities, and of the Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons, including the primary examination for the F.R.C.S.Eng. The courses are open to women students on the same terms as to men.

Regular students who have completed their preliminary and intermediate examinations proceed to a hospital to pursue their studies for the final examinations. The hospitals associated with King's College are: King's College Hospital, Denmark Hill, S.E.5; Westminster Hospital, S.W.1; St. George's Hospital, Hyde Park Corner, S.W.1; and Charing Cross Hospital, Strand, W.C.2

A course for the degree of the University of London and for the Diploma of the Royal College of Surgeons in dental surgery in conjunction with King's College Hospital Medical School has been arranged.

Scholarships.—The entrance Scholarships are: (1) Two Warneford Scholarships, each £30 for four years; subjects—selected from mathematics, classics, divinity, and science. (2) One Sambrook Scholarship of £30 for three years; subjects of examination selected from mathematics, classics, and science. The holders of the preceding awards must proceed to King's College Hospital. (3) Worsley, £100, paid in five annual instalments. (4) Rabbeth Scholarships, value £30 and £15, in July, for the best student of the first year. (5) Second year's scholarship, value £20, for the best student of the second year. (6) Daniell Scholarship £40, awarded on the results of the University Honours Examination. (7) The Layton and Berridge Studentships, each £150 per annum, and (8) numerous prizes.

Full information as to admission, fees, and scholarships can be obtained from the Dean of the Faculty of Medical Science, King's College, Strand, W.C.2.

UNIVERSITY COLLEGE.

THIS institution, one of the principal component parts of the University of London, possesses a Faculty of Medical Sciences whose work covers all the subjects included in the group commonly known as the preliminary medical sciences—namely, physics, chemistry, botany, and zoology; and also the intermediate medical sciences—namely, anatomy, physiology, and pharmacology. The new anatomy building, provided by the munificent gift of the Rockefeller Foundation of New York, was opened on May 31st, 1923, by His Majesty the King. This building forms part of the block which includes physiology and pharmacology. The department of hygiene and public health prepares for the diplomas in public health of the Royal Colleges and of the various universities. Research work is undertaken in all the above-named departments. The College undertakes the education of students in all the subjects mentioned, leaving them free to complete their education in the strictly professional subjects—medicine, surgery, and the like—at any one of the recognized schools of advanced medical studies. The work is somewhat differently arranged, according to whether the student has in view the degrees of the University of London or the diplomas of the Royal Colleges. In either case the whole work to be done is divided into courses devised to meet the requirements of different examinations, and students can join the College for any of them. Women students are admitted to all courses on the same terms as men. The general arrangements for the benefit of students include membership of the Union Society or the Women's Union Society with the College gymnasium and the athletic grounds. There is also a collegiate residence for about fifty-five men students at Ealing, and for about seventy women students at Byng Place, Gordon Square.

Scholarships.—The scholarships and exhibitions obtainable include the Bucknill Scholarship, value 135 guineas, in chemistry, physics, botany, and zoology (the successful student must complete his work at University College Hospital Medical School), two entrance exhibitions in the same subjects, each of the value of 55 guineas, and a Faculty of Medical Sciences Entrance Scholarship, value £30 a year, for three years.

Fees.—The fees for the courses covering the work of the First Examination for medical degrees of the University of London, and in both parts of the Second Examination, amount to 115 guineas. The fees for the courses covering the corresponding examinations

held by the Conjoint Board in England also amount to 115 guineas. These fees may be divided into payments for the different courses which it may be desired to take out, but do not cover tuition for more than a stated period.

A handbook specially relating to this faculty may be obtained on application to the Secretary of University College, Gower Street, London, W.C.1.

THE PROVINCES.

THERE are in England and Wales, not counting London, ten medical schools, each supplying instruction in the full medical curriculum. Accounts of them here follow. In several cases there is appended information about hospitals other than those directly connected with the school in question; such hospitals, officially and unofficially, play a part in the education which the students of the school receive, and in any case serve as places of additional or post-graduate study.

OXFORD AND CAMBRIDGE.

AT both Oxford and Cambridge there are medical schools which furnish unsurpassed opportunities for obtaining a good knowledge of the preliminary sciences and of anatomy, physiology, and pathology. The laboratories are excellently furnished, and the teaching staffs most distinguished. Both schools provide a full medical curriculum, and there is no essential reason why the student should not complete his career at either of them; but this is not commonly done, and is never in the ordinary way advised by the university medical authorities. The local hospitals, though well equipped, are comparatively small. Students are therefore encouraged, as soon as they have completed the earlier examinations and taken a degree in arts, to join some London school, and thus spend the time of their preparation for the final examinations in a city where the opportunities for gaining clinical knowledge are greater and more varied. A considerable proportion of Oxford and Cambridge medical students take the London Conjoint diplomas before graduating in medicine and surgery at their own university. The experience gained by holding resident hospital appointments is naturally of much advantage when sitting for the Final M.B. examination and when engaged in composing a thesis.

BIRMINGHAM.

THE school in this city is carried on by the Medical Faculty of the University of Birmingham, its students having an adequate number of good laboratories, classrooms, and other necessaries devoted to their use by the university. The clinical work is done at the General and Queen's Hospitals, which are amalgamated for the purpose. Together they have upwards of 600 beds for medical, surgical, and special cases, and with an array of special departments of all kinds, including one for lying-in women. Clinical instruction is given in the wards and out-patient and special departments daily, and formal clinical lectures delivered weekly throughout the winter and summer sessions. Special tutorial classes are also held alike for the degrees of Birmingham and some other universities and for the diplomas of corporations.

Appointments.—The large number of appointments open to past or other students includes the following:—At the General Hospital: surgical registrar, £200 a year; one resident medical officer, salary £155 a year; one resident surgical officer, salary £180 a year; one assistant resident surgical officer, salary £100 a year; one resident pathologist, salary £70 a year; two visiting anaesthetists, salary £50 a year; one resident anaesthetist, salary £70 a year; four house-surgeons, office tenable for nine months, £70 a year; one house-surgeon to the gynaecological and one to the special departments, each tenable for six months, £70 a year; four house-physicians, post tenable for six months, £70 a year. At the Queen's Hospital: one medical registrar and one surgical registrar, non-resident, tenable for three years, renewable, salary £100 per annum; three house-physicians, three house-surgeons, and one obstetric and ophthalmic house-surgeon, tenable for six months, salary £70 per annum, with board, lodging, and washing; one casualty house-surgeon, tenable for three months, salary £70 per annum, with board, lodging, and washing. At the Maternity Hospital: three house-surgeons, salary £50 a year. At the City Workhouse and Workhouse Infirmary: five resident medical officers. At the Birmingham General and Branch Dispensaries: twelve resident surgeons. At the Birmingham Mental Hospitals: five assistant medical officers. At the City Fever Hospitals: three assistant medical officers. At the Children's Hospital: one resident surgical officer, one resident medical officer. At the Birmingham and Midland Eye Hospital: four resident surgeons. At the Orthopaedic and Spinal Hospital: two clinical assistants (non-resident). At the Ear and Throat Hospital: one house-surgeon, £70 a year; four clinical assistants (non-resident). Four non-resident Poor Law appointments are in the gift of the Board of Guardians.

Scholarships.—There are numerous money and other awards for students of sufficient merit, among them being the following: The Walter Myers Travelling Studentship of £300, offered each alternate year for research work and tenable abroad; the Sands-Cox Scholarship of £42 (an entrance scholarship in the Faculty of Medicine, awarded on Higher School Certificate Examination of the Joint Matriculation Board (July); four Queen's Scholarships of £10 10s. each, awarded annually at the first (Part II), second, third, and final university examinations respectively; one or more Sydenham Scholarships, allotted on entrance to students who are the sons of deceased medical men; the Ingleby Scholarships (two) of £10 for proficiency in midwifery and diseases of women; the Arthur Foxwell Memorial Gold Medal (Clinical Medicine); the Sampson Gamgee Memorial Medal for Surgery (Final M.B.); and the Peter Thompson Prize in Anatomy (value about £6) for students in their second university year. There is also a scholarship of £37 10s. for students proceeding to a degree in dental surgery. University Clinical Board Prizes are awarded annually as follows: Senior Medical Prize, Gold Medal; Senior Surgical Prize, Gold Medal; Midwifery Prize, Gold Medal; Junior Medical Prize, Silver Medal; Junior Surgical Prize, Silver Medal.

Fees.—The composition fee for university classes is £106 5s. This covers all the work required for the degrees of Birmingham and some other universities, and for the ordinary qualifications of licensing corporations, but not the additional courses required for the Fellowship of the Royal College of Surgeons of England, the diploma and degrees of the university in State medicine, and some other special work. The total cost for the five years' curriculum, including hospital and examination fees, is estimated at £201 4s. 6d.

Other information should be sought from the Dean of the Medical Faculty, University, Edmund Street, Birmingham.

BRISTOL.

THE school is carried on by the Faculty of Medicine of the university, and provides full instruction for all its degrees and for the diploma in dental surgery.

Clinical Instruction.—The allied hospitals (Bristol Royal Infirmary and Bristol General Hospital) have between them 623 beds and extensive out-patient departments, special clinics for diseases of women and children, and those of the eye, throat, and ear, in addition to large and well equipped departments for dental work and large outdoor maternity departments. At each of these institutions there are well arranged pathological museums, *post-mortem* rooms, and laboratories for morbid anatomy. There are also laboratories for work in clinical pathology, bacteriology, and cytology, in which special instruction is given in these subjects. Departments are provided and well equipped for *x*-ray work, both for diagnosis and treatment, the various forms of electrical treatment, including high-frequency currents, electric baths, Finsen light treatment, and massage. The students of the school also attend the practice of the Royal Hospital for Sick Children and Women, containing 100 beds, and that of the Bristol Eye Hospital, with 40 beds. The total number of beds available for clinical instruction is therefore 768.

Appointments.—(1) Undergraduate: Clinical clerkships, dresserships, also ophthalmic, obstetric, pathological, ear, nose, and throat clerkships, are tenable at the Bristol Royal Infirmary and the Bristol General Hospital. In these institutions the dressers reside in rotation free of charge. (2) Post-graduate: At the Bristol Royal Infirmary: four house-surgeons, one casualty house-surgeon, two house-physicians, one house-physician for cancer research ward, one resident obstetric officer, one ophthalmic and gynaecological house-surgeon, one ear, nose, and throat house-surgeon, one assistant to the senior resident medical officer who also acts as house-surgeon, and one dental house-surgeon. All these appointments are for six months. Salary in each case at the rate of £80 per annum, with board, apartments, and laundry, unless the candidate appointed has previously held a resident appointment in the infirmary,

when the salary will be at the rate of £100 per annum, with board, apartments, and laundry. From the resident medical officers a senior resident medical officer is appointed at a salary of £200 per annum. At the Bristol General Hospital: senior resident medical officer, £250 per annum; casualty house-surgeon, £80 per annum; two house-physicians, £80 per annum; house-surgeon, £80 per annum; resident obstetric officer, £80 per annum; house-surgeon to special departments, £80 per annum; dental house-surgeon (non-resident), £300 per annum. All these appointments are for six months, except that of senior resident medical officer, which is for two years.

Scholarships.—The following are among the scholarships and other awards open to students of the school: The Ashworth Hallett Scholarship, value £40, open to women only; two Martyn Memorial Pathological Scholarships of £10 each; the Tibbits Memorial Prize, value 7 guineas, for proficiency in practical surgery; the Committee's Gold and Silver Medals, for fifth-year students for general proficiency; the Augustin Prichard Prize, value about 6 guineas, for proficiency in anatomy; the Henry Clark Prize, value 11 guineas, for proficiency in gynaecology; the Crosby Leonard Prize, value 6 guineas, for proficiency in surgery; the Suple Surgical Prize, a gold medal and 7 guineas; the Suple Medical Prize, a gold medal and 7 guineas; the Henry Marshall Prize, value £12, for dressers; the H. M. Clarke Scholarship, value £15, for proficiency in surgery; the Sanders Scholarship, value £22 10s., for general proficiency; the Barrett-Roué Scholarship for proficiency in diseases of the nose, throat, and ear, or skin, value £17; Lady Haberfield Scholarship, value about 25 guineas; Phyllis Siepman Prize for proficiency in diseases of children, value £25. Bristol City Senior Scholarships and the Senior Scholarships offered by the counties of Gloucestershire, Somerset, Wilts, Devon, etc., are tenable in the university.

Some of the Fellowships awarded by the Colston Research Society for research in the university are allotted to the Faculty of Medicine.

Fees.—The fee for all the courses required for the medical curriculum, including hospital practice, is 205 guineas, paid by annual instalments.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

THIS, the Medical School of the Faculty of Medicine of the University of Durham, is in the neighbouring city, Newcastle-on-Tyne. Its classes and lectures are arranged to meet the requirements of the university in all the degrees (other than Hygiene) which the latter grants, and also those of the other examining bodies. The students do their work in the preliminary sciences at Armstrong College, also part of the university, and their clinical work in the Royal Victoria Infirmary, an institution with more than 550 beds and special accommodation for the benefit of students. Students do their practical midwifery at the Princess Mary Maternity Hospital, which contains 80 beds, is thoroughly up to date, and there is an annual indoor and outdoor attendance on 3,000 cases. In a Heath wing of the school itself there is the department of physiology. There are also in this wing a gymnasium and a set of rooms for the use of the Students' Union. A new bacteriological department has been erected adjacent to Armstrong College.

Post-Graduate Instruction.—A comprehensive series of post-graduate courses has been arranged to enable practitioners to take advantage of the facilities for laboratory work and clinical study which are afforded by the College, the Royal Victoria Infirmary, and other associated hospitals, and in order to meet the varied requirements of practitioners there are general and special courses in the winter and summer session as well as an intensive course in the summer vacation.

Students' Union.—Students' Union Buildings have been erected and furnished at a cost of over £40,000, and are now in daily use. Separate accommodation (non-residential) is provided for men and women students.

Appointments.—Pathological assistants, and assistants in the eye department, throat and ear department, and department for skin diseases, are elected periodically. Clinical clerks and dressers are appointed every three months.

Scholarships.—University of Durham Entrance Scholarship, £25 a year for four years; Pears Entrance Scholarship, £40 a year for three years (awarded every third year); Province of Durham Masonic (Entrance) Scholarship, £60; Heath Scholarship for surgery, £200, available every second year; Rutherford Morison Surgical Scholarship, £180, available every third year.

The following scholarships are tenable for one year—namely, Tulloch Scholarship for elementary biology and organic chemistry, £20; Dickinson Scholarship for medicine, surgery, midwifery, and pathology, Gold Medal and £20; Charlton Scholarship for medicine, £25; Gibb Scholarship for pathology, £28; Luke Armstrong Scholarship for comparative pathology, £25; Stephen Scott Scholarship for surgery, £40; Philipson Scholarships for highest marks in Final M.B., B.S. Examination, two of £48 each; Goyder Memorial Scholarship for clinical medicine and clinical surgery, interest on £325; Gibson Prize for midwifery and diseases of women and children, £10; Turnbull Prize and Silver Medal for surface anatomy; Outterson Wood Prize for psychological medicine, £10; and Sewell Memorial Prize and Silver Medal for clinical pathology. At the end of each session a prize of books is awarded in each of the regular classes.

Fees.—The composition fee for lectures at the college is £140. Composition fee for hospital practice, £46, *plus* £2 2s. yearly for three years, payable to the Committee of the Royal Victoria Infirmary. Other information should be sought from the Registrar of the College of Medicine at Newcastle.

LEEDS.

THE School of Medicine—which is open to both male and female students—in this city forms the teaching centre of the Medical Faculty of the University of Leeds, and is situated in immediate proximity to the General Infirmary, where students sufficiently advanced receive their clinical instruction. The buildings were opened in 1894, and contain excellent dissecting rooms, well arranged laboratories for physiology, pathology, and bacteriology, three lecture theatres, and several similar classrooms. In addition, there are a library and reading room and two museums, one being devoted to pathology and the other to anatomy. The comfort of the students is secured by common rooms and a refectory in which they can take meals. The General Infirmary has 632 beds, and includes gynaecological and ophthalmic wards, a special children's ward, and a large out-patient department. The Ida and Robert Arthington Semi-convalescent Hospitals, Cookridge, attached to the infirmary, have 88 beds. The West Riding Mental Hospital at Wakefield is open for the study of mental diseases. Students can, in addition, attend the practice of the Leeds Public Dispensary, the Hospital for Women and Children, and the Leeds Maternity Hospital, where the obstetric work is done.

Appointments.—Surgical dressers are appointed every six months; physicians' clerks, clerks in the children's department, orthopaedic dressers, ophthalmic and aural dressers, gynaecological ward clerks, maternity clerks, assistant physicians' clerk, dermatological clerks, assistant surgeons' dressers, dressers in the casualty room, *post-mortem* clerks, laboratory assistants and dressers in the venereal clinic every three months. After graduation there are a considerable number of residential and other appointments available in the Leeds General Infirmary, Leeds Public Dispensary, Hospital for Women and Children, West Riding Mental Hospital, etc., occupying periods of from six to twelve months at rates varying from £20 to £150 per annum.

Scholarships.—The university awards annually a scholarship in the form of a free admission to the lectures and classes given in the university, which are covered by the composition fee. The university also awards a scholarship on the results of the first examination, of the value of £68, in the form of a free admission to the clinical teaching of the infirmary.

Fees.—It is estimated by the authorities that the approximate cost of medical education to a student in this university is £324, *plus*, of course, the expenses of living during the five years covered by the curriculum. The composition fee for the course for the first, second, and third examinations, and for the clinical work at the infirmary, is £237. The composition and clinical fee for those who have passed the second examination is £150.

Further information can be obtained from the Academic Subdean or Clinical Subdean, School of Medicine, Leeds.

LIVERPOOL.

THE Medical School of this city is part of the university, and, owing to the enlightened liberality of several men of wealth, is exceptionally well provided with special laboratories, as well as with ordinary spacious and well equipped classrooms and laboratories for the instruction of students proceeding to medical degrees and diplomas in special and ordinary subjects. All the laboratory and other rooms are situated close to one another and intercommunicate, together forming large blocks of buildings. The work of students throughout all stages of their career is arranged upon very satisfactory lines, and the teaching hospitals, of which an account is given overleaf, have amalgamated to form the clinical school of the university.

Appointments. The nature of the appointments open to past and other students at this school will be gathered from the account which follows of the hospitals forming its clinical department.

Scholarships.—The awards made each year to successful students total over £1,500. They include the following: Two Holt Fellowships, one in Pathology, the other in Physiology; a Robert Gee Fellowship in Anatomy; two John Rankin Fellowships in Anatomy; a John W. Garrett International Fellowship in Bacteriology; a Johnston Colonial Fellowship in Biochemistry; an Ethel Boyce Fellowship in Gynaecology; and a Thelwall Thomas Fellowship in Surgical Pathology; one Lady Jones Fellowship in Orthopaedic Surgery (value of Fellowships: one at £200, three at £150, two at £120, four at £100); a University Scholarship of £50, awarded on the results of the Final M.B. (Part A) Examinations; a Scholarship in Mechanical Dentistry of £20; two Lyon Jones Scholarships, of the annual value of £21 each for two years, one for the junior and the other for the senior students; the Derby Exhibition of £15; the Clinical School Exhibition of £15; the Owen T. Williams Prize; the Torr Gold Medal in Anatomy; John Rankin Exhibition in Practical Anatomy, £25; the George Holt Medal in Physiology; the Kanthack Medal in Pathology; Mitchell Banks Medal in Anatomy; the Robert Gee Prize of £5 5s. in Children's Diseases; Mary Birrell Davies Memorial Scholarship (women), £60 per annum for four years; Robert Gee Entrance Scholarship (men), value of £40 per annum for four years; Dental Operating Prizes (four); Orthodontia Prizes (two); Samuels Memorial Scholarships, three at £20 each; one Thomas H. Bickerton Prize in Anatomy; Dr. N. E. Robert Prize in Zymotic Diseases; Ash's Prize in Dental Surgery, value £2 2s.; Gilmour Medal; and other entrance scholarships. In addition, a number of gold and silver medals have recently been instituted in the following subjects: Pharmacology, Surgery, Forensic Medicine and Toxicology, Public Health, Medicine, Obstetrics and Gynaecology, Orthopaedic Surgery, and Laryngology and Otology.

Fees.—Information as to the fees for the courses of instruction provided by the schools should be sought from the Dean of the Medical Faculty.

The Clinical School.

As many as ten hospitals have combined to form the clinical school of the university, these being: The Royal Infirmary, the David Lewis Northern Hospital, the Royal Southern Hospital, the Stanley Hospital, the Royal Liverpool Children's Hospital, the Hospital for Women (with the Samaritan Hospital), the Liverpool Maternity Hospital, the Eye and Ear Infirmary, St. Paul's Eye Hospital, and St. George's Hospital for Diseases of the Skin. Between them they provide over 1,445 beds.

MANCHESTER.

THE staff of the Medical School in this city constitutes the Medical Faculty of the Victoria University, all the arrangements for the instruction of students, both in their earlier and their later studies, being of an elaborate nature. The clinical work of the undergraduates is done chiefly in connexion with the Royal Infirmary, an institution which itself contains 668 beds, and has associated with it a large convalescent home (132 beds) and a Central Branch Hospital (54 beds). The courses in mental diseases are partly taken in the County Mental Hospitals at Prestwich and Macclesfield. Instruction in practical gynaecology and midwifery is given at the Royal Infirmary and the St. Mary's Hospitals.

Appointments.—The following are among the appointments open to past and present students of this school in connexion with its arrangements for clinical tuition: One surgical registrar, at £150 per annum; two pathological registrars, at £100 and £50 per annum; one medical registrar, at £150 per annum; a cardiological registrar, at £150 per annum; a surgical tutor, at £30 per annum; a director of the clinical laboratory, at £400 per annum, and two assistants, at £350; three assistant medical officers and three assistant surgical officers, each at £35 per annum; assistant surgical officer, aural department, at £35 per annum; seven anaesthetists, from £75 to £100 per annum each; one resident medical officer, one year, £200 per annum; ditto at the Royal Lunatic Asylum, Cheadle, one year, £300 per annum; one resident surgical officer, one year, £200 per annum; three resident medical officers for Central Branch, one at £200 and two at £100 per annum; one assistant resident surgical officer, £150 per annum; one resident medical officer at the Convalescent Hospital at Cheadle, £250 per annum; two assistant medical officers to radiological department, £150 and £105 per annum; medical officer, physio-therapeutic department, £150 per annum; assistant surgical officer, gynaecological department, £35 per annum; assistant to the dermatologist, £20 per annum; and three assistant surgical officers for Central Branch, £75 per annum; ten senior and ten junior house-surgeons and ten house-physicians, appointed during the year for periods of six months, at a salary of £50 for the first six months, and £100 for the second six months. Resident officers are appointed to the gynaecological, the eye, and the ear and throat departments every three months. Clinical clerks and surgical dressers are appointed to the various departments of the hospital every three months. Non-resident clinical assistantships for qualified medical women, tenable for six months, at an honorarium of £35.

Entrance and other Scholarships.—The following are among the scholarships obtainable by students of the school: Rogers and Seaton Scholarships in Arts (in alternate years), £40 per annum, tenable for two years. Three Hulme Scholarships, tenable for three years, of £35, one being awarded annually for proficiency in subjects of general education. Two James Gaskill Scholarships of £35, tenable for two years, one being awarded annually for proficiency in the branches of mechanics and chemistry. A Dora Muir Scholarship, £30 per annum, tenable for three years, and open to the competition of women students only. This is awarded triennially. Sir J. P. Kay-Shuttleworth Scholarship, £30 per annum, tenable for three years, awarded triennially, open to the competition of scholars from Sedburgh School, Giggleswick School, and Burnley Grammar School; subjects—mathematics, chemistry, and mechanics. Dreschfeld Memorial Scholarship, value £20, tenable for two years and awarded triennially on the result of the Entrance Examination. John Russell Medical Entrance Scholarship, awarded annually, value £45. Two Dauntesey Junior Medical Scholarships, value £50 each, tenable for one year, for candidates who have not commenced the second year of study leading to a medical qualification; subjects—zoology, botany, and chemistry. One Dauntesey Senior Medical Scholarship, £50 for one year, awarded on results of second M.B. Examination. Two Entrance Scholarships in Medicine, value 160 guineas, awarded annually for proficiency in arts or science respectively. Tom Jones Exhibition in Anatomy, £25, offered annually. A Robert Platt Physiological Scholarship of £90, tenable for one year. A Leech Fellowship of £100 for original research after graduation. Graduate Prize in Medicine, £5, annually. A Graduate Research Scholarship in Medicine, value £70, tenable for one year, awarded annually for proficiency shown at Final M.B. Examination, open to Graduate Prizemen. A Dumville Surgical Prize, value £15, awarded annually at graduation. The Tom Jones Memorial Surgical Fellowship, value £105, tenable for one year, usually awarded annually. The Turner Medical Prize, value £20, awarded annually for proficiency in certain subjects of the Final M.B., Ch.B. Examination. The John Henry Agnew Prize of £30, awarded annually for proficiency in the Diseases of Children. The Ashby Memorial Scholarship, tenable for one year (£100), for research in the Diseases of Children; offered triennially. Sidney Renshaw Prize in Physiology; one offered annually (£15). The John Henry Agnew Fellowship in Diseases of Children, £120, offered triennially. Eliza Marple Holt Post-Graduate Medical Scholarship for Women, £60 for one year, offered biennially. The details and regulations of the Dickinson Scholarships—(1) for Anatomy, (2) for Pathology, (3) Research Scholarship in Surgery, and (4) Travelling Scholarship in Medicine—may be obtained from the Secretary to the Trustees. The Morrison Watson Fellowship for research in Anatomy is offered annually, value £150; also the Sheridan Delepine Fellowship in Preventive Medicine, value £300, is offered biennially. The Sam Gamble Scholarships—the trustees are prepared to award four scholarships of not less than £40 per annum, tenable for not more than four years, to women students who have passed the First M.B. Examination; the conditions can be obtained from the Registrar. The Knight Prize of £50 for original research in the psychological factors in the causation of mental disorder—open to holders of the Diploma in Psychological Medicine or medical practitioners who have been registered in the university as candidates for that diploma.

Fees.—The composition fee for the university course in medicine is 110 guineas, payable in four instalments of 27½ guineas, but this sum does not include the fee to cover the work required for the First M.B. Examination. This is £42, payable in one sum. Hospital fees are additional, and usually amount to about 77 guineas.

A prospectus and further information about the school and scholarships may be obtained from the Registrar.

Clinical Work.—The Royal Eye Hospital, the Hospital for Diseases of the Skin, the Manchester Northern Hospital for Women and Children, the well known Hospitals for Children at Pendlebury, and St. Mary's Hospitals for Women and Children, the Manchester Hospital for Diseases of the Ear, the Christie Cancer Hospital, the Hospital for Consumption and Diseases of the Throat and Chest, the Ancoats Hospital, and the Salford Royal Hospital, all make arrangements for the instruction of students.

SHEFFIELD.

IN this city the medical school is one of the departments of the university, being conducted and controlled by its Medical Faculty, and occupying practically the entire north wing of the quadrangle of the university buildings over-

looking Weston Park. The laboratories and lecture rooms connected with the subjects of the first and second examinations—namely, chemistry, physics, biology, anatomy, and physiology—are, both as regards structural arrangement and scientific equipment, on the most modern and complete lines.

For students of pathology and bacteriology there are laboratories replete with everything necessary for the most advanced work, and a large pathological museum, which is open daily. In addition, there is a large library and reading room. There are a number of recreation, athletic, and other societies, all under the management of an annually elected students' representative council, and large and comfortable common rooms both for men and women students. There are also two student unions—one for men and one for women students. In the university buildings there is a refectory open to all students of the school, and a university journal is published each term. The ordinary clinical work of the school is done at the Royal Infirmary and Royal Hospital, which have amalgamated for the purpose of clinical instruction, and provide over 800 beds for medical, surgical, and special cases, including diseases of the eye.

In addition, the Royal Infirmary has special departments for the treatment of diseases of the skin and ear, with beds assigned to them; whilst at the Royal Hospital there are special out-patient departments for diseases of the throat, ear, skin, orthopaedics, and mental diseases. The medical and surgical staffs attend daily, and give clinical instruction in the wards and out-patient rooms. Clinical lectures in medicine and surgery are given weekly. Instruction in the practical administration of anaesthetics is given at either institution by the anaesthetists, and the *post-mortem* examinations at both institutions are in charge of the Professor of Pathology, and afford ample material for study of this subject. Students are able to attend the practice of the Jessop Hospital for Diseases of Women and the Hospital for Sick Children, while special courses on fever are given at the City Fever Hospital, and on mental diseases at the South Yorkshire Mental Hospital.

Appointments.—The following appointments are open to all students who have passed their examinations in anatomy and physiology: (1) casualty dresserships, (2) surgical dresserships, (3) medical clerkships, (4) pathological clerkships, (5) ophthalmic clerkships, (6) clerk to the skin department, etc. These appointments are made for three months, commencing on the first day of October, January, April, and July.

Scholarships.—Entrance Medical Scholarship, value about £150, open to both sexes. Six Edgar Allen Scholarships of £125 a year for three years may be held by students taking the degree course in medicine. Two Town Trustees' Scholarships, each of the value of £50, tenable for three years, for boys or girls under the age of 19 years who have been educated in a Sheffield secondary school for a period not less than two years immediately preceding the examination. Four Town Trustees' Scholarships, value £50, for boys or girls under 19 years of age educated in any school in Sheffield, secondary or otherwise. Town Trustees' Fellowship, value £75, tenable for one year. Mechanics' Institute Fellowship, value £50 (with remission of fees), tenable for one year, and renewable for a second year. The Frederick Clifford Scholarship, value about £50, tenable for two years. Kaye Scholarship, for proficiency in anatomy and physiology. Gold and bronze medals are also awarded for proficiency in various subjects.

Fees.—Students in the Faculty taking their complete medical course in the university pay an inclusive composition fee of £38 for each of the five years. The composition fees for the dental courses are as follows: for B.D.S., first and third years, £75; second, fourth, and fifth years, £25; for L.D.S., first and second years, £75; third and fourth years £25. The fees for special courses taken separately can be ascertained by inquiry of the Dean.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

WELSH NATIONAL SCHOOL OF MEDICINE, CARDIFF.

THE next session opens on October 4th. The courses of instruction are open to both men and women students, and qualify for the degrees in medicine and surgery of the University of Wales, and for the degrees and diplomas of other examining bodies. Hospital instruction is given at the Cardiff Royal Infirmary, at the City Lodge Hospital, and at other recognized institutions. The Cardiff Royal Infirmary, together with its auxiliaries, has 489 beds, and is well equipped in all general and special departments, giving facilities for every branch of study. Medical practitioners wishing to prepare for the Diploma in Public Health or for the Tuberculous Diseases Diploma of the University of Wales can attend complete courses of instruction in the school. Prospectuses can be obtained on application to the Dean of the Faculty of Medicine, or to the Secretary, Welsh National School of Medicine, Newport Road, Cardiff.

SCOTLAND.

As will be gathered from the following paragraphs, the facilities for acquiring a medical education in Scotland are very ample, whether the student be proceeding to a university degree or to a diploma. To the descriptions of the different Scottish medical centres is in some cases added an account of hospitals which either play an official part in the education given to students as yet unqualified, or offer valuable opportunities for post-graduation work.

ABERDEEN.

THE school is conducted by the Faculty of Medicine. This comprises thirteen chairs, from which instruction is given in all the main branches of medical science—namely, botany, zoology, physics (ordinary and pre-registration), chemistry (ordinary and pre-registration), anatomy, physiology, materia medica, pathology, bacteriology, forensic medicine, surgery, medicine, and midwifery. Courses of instruction in public health and infectious diseases, tropical medicine, medical ethics, and tuberculosis are conducted by lecturers appointed by the University Court. Special opportunities for practical instruction are afforded in the laboratories and museums attached to the departments.

Clinical instruction is obtained in the Royal Infirmary (accommodating 335 patients), the Royal Mental Hospital (900 patients), the Sick Children's Hospital (85 patients), the City Fever Hospital (350 patients), the General Dispensary, Maternity, and Vaccine Institution (10,000 out-patients annually), and the Ophthalmic Institution (3,000 patients annually). Courses of practical instruction are given in diseases of children at the Sick Children's Hospital; in fevers at the City Fever Hospital; in mental diseases at the Royal Mental Hospital; in diseases of the ear, nose, and throat at the Infirmary and Dispensary; in diseases of the eye at the Infirmary and Eye Institution; in venereal diseases and diseases of the skin at the Royal Infirmary.

The degrees granted in medicine are: Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), Bachelor of Surgery and Bachelor of Medicine (M.B., Ch.B.). A Diploma in Public Health is conferred after examination on graduates in medicine of any university of the United Kingdom.

The degree of Ph.D. is also granted in this faculty.

Bursaries, scholarships, and fellowships, to the number of fifty and of the annual value of £1,180, may be held by students of medicine in this university. They range from £8 to £100 per annum, and are tenable in most cases for two or three years. The winter session begins on October 11th, 1927; the summer session on April 17th, 1928.

Fees.—An inclusive fee of 126 guineas is payable for instruction within the university, and the fee for the degrees of M.B., Ch.B. is 33 guineas. The total cost, including hospital fees, class and matriculation fees, and degree fees, is about £236.

EDINBURGH.

THERE are two Schools of Medicine: the School of the University, and the School of Medicine of the Royal Colleges of Physicians and Surgeons of Edinburgh.

THE UNIVERSITY SCHOOL.—This school, in addition to other resources of the university, has the following means of affording practical instruction: Royal Botanic Garden, Herbarium, and Museum; Zoological Laboratory and Museum of Science and Art; Physical Laboratory; Chemical Laboratories; Dissecting Room, Bone Room, and Anatomical Museum; Physiological Laboratory; Medical Jurisprudence Laboratories; John Usher Institute of Public Health; Materia Medica Museum and Laboratory; *Post-mortem*

Department of the Royal Infirmary and University Pathological and Bacteriological Laboratory; Tutorial Classes of Practice of Physic, of Clinical Medicine, and Clinical Surgery, Surgery and Midwifery; and the practice of certain other hospitals.

Fees.—The sessional fee for chemistry, anatomy lectures, physiology, pathology, materia medica, surgery, medicine, and midwifery is £6 6s. each. Physics, botany, zoology, forensic medicine, and public health, £5 5s. Practical zoology, practical anatomy (summer), morbid anatomy, practical materia medica, mental diseases, practical pathology, clinical midwifery, and medical entomology and parasitology, £4 4s. Experimental physiology, diseases of tropical climates, practical botany, histology, operative surgery, clinical surgery (per term), clinical medicine (per term), and experimental pharmacology, £3 3s. Practical anatomy (winter), £6 16s. 6d. Practical chemistry, £4 14s. 6d. Regional anatomy, chemical physiology, surgical pathology, and infectious diseases, £1 11s. 6d. Tuberculosis, diseases of children, diseases of the eye, diseases of the larynx, ear, and nose, diseases of the skin, and venereal diseases, £2 12s. 6d. Advanced bacteriology, £7 17s. 6d. Clinical gynaecology and applied anatomy, £2 2s.

Scholarships.—There are many funds for the assistance of students by means of bursaries, scholarships, exhibitions, and money awards from the beginning to the end of their undergraduate career. In addition, there are funds which help those who have taken a first degree in medicine and surgery to continue at work as research students. The value of these awards, and the conditions attaching to them, are so varied that those interested should consult the prospectus of the school itself. No other university is in a better, even if as good, position to smooth the financial path of earnest students.

THE SCHOOL OF MEDICINE OF THE ROYAL COLLEGES.—This school is composed of lecturers licensed by the Royal College of Physicians and the Royal College of Surgeons, and also recognized by the university through their *licentia docendi*; for the sake of convenience they lecture in separate buildings near to the Royal Infirmary, but form a single corporate body governed by a board consisting of five members elected by the Royal College of Physicians, five members elected by the Royal College of Surgeons, and five members elected by the lecturers in the school. This board, with the assistance of the standing committees of the school, supervises the whole management and especially the maintenance of the efficiency and discipline of the school. The different buildings at present utilized for the purposes of lecturing are the following: (1) Surgeons' Hall, Nicolson Street; (2) New School, Bristo Street; (3) Nicolson Square; (4) Marshall Street; and other places. The teaching is similar to that of the Scottish universities, and the students receive similar certificates at the close of each session. The courses on the special subjects not included in the curriculum of the Examining Boards are also conducted by teachers specially qualified in each branch, and have for the last quarter of a century formed a special feature of the school. The fees payable for class and other instruction, and including the sums payable on admission to the examination of the Conjoint Board for the triple qualification, amount to about £180. The Calendar, giving full information regarding classes and fees, can be obtained (price 6d.) on application to the Dean of the School, Surgeons' Hall, Edinburgh.

WOMEN STUDENTS IN EDINBURGH.—Until the close of the summer session of 1916 women students intending to proceed to graduation in the University of Edinburgh, as well as those entering for the triple qualification of the Royal Colleges of Edinburgh and Glasgow, received their training in the Edinburgh School of Medicine for Women. Now women students study under the same conditions as men, and may obtain either the university degree or the diploma of the Royal Colleges. In the university systematic lectures are given to them by the professors in the ordinary classes, which are therefore mixed. In clinical medicine and clinical surgery, however, while the lectures are attended by mixed classes, the women students are restricted to the wards of one charge. The particular wards are changed every term, each of the physicians and surgeons to the infirmary taking the women students in rotation. With few exceptions, prizes, scholarships, bursaries, and similar distinctions are open to women under the same conditions as for men. The women students also have the same privileges as in the past have been given to the men of attending a certain proportion of the extra-mural classes taught by the lecturers of the School of Medicine of the Royal Colleges. Most of the Students' Societies are open to women, with the exception of the University Union and the Royal Medical Society. Their place is taken by the Women Students' Union and the Women's Medical Society. There is also a Women's Athletic Club, with playing fields gifted to it by the university. The membership of the Royal College of Physicians and Fellowships of the two Royal Colleges are also open to women. Information on matters connected with women's studies may be obtained from the Lady Warden, University New Buildings, Edinburgh.

GLASGOW.

THE UNIVERSITY SCHOOL FOR MEN.—The whole course of study required for graduation (M.B., Ch.B.) at the University of Glasgow can be taken here. Besides ample provision for lectures there is practical and clinical work at the hospitals, and practical courses are conducted in the laboratories of the following departments: Pathology, Public Health, Pharmacology, Physiology, Surgery, Anatomy, Chemistry, Zoology, Physics, and Botany; the Botanic Garden and the Hunterian Museum (Pathology) are also open to students. Well equipped new buildings have been provided for botany, zoology, practical anatomy, and operative surgery, as well as for pathology; the very large additions made a number of years ago to the chemical laboratory render it one of the most extensive in Scotland. The classrooms and laboratories for the departments of Physics, Physiology, Pharmacology, Materia Medica, Medical Jurisprudence, and Public Health are also of recent erection, and are elaborately equipped. Four additional chairs of Medicine, Surgery, Obstetrics, and Pathology have been recently established, the professors being specially attached to the Royal Infirmary; and a number of university lectureships in Clinical Medicine, Clinical Surgery, Venereal Diseases, Laryngology, Dermatology, Otology, Psychological Medicine, Tuberculosis, and Electrical Diagnosis and Treatment have been founded there. Five other chairs have been founded at the university, in Bacteriology, Organic Chemistry, Physiological Chemistry, Applied Physics, Public Health, and Pediatrics. There are also lectureships on the Surgical and Medical Diseases of Children and on Electrical Diagnosis and Therapeutics. The university, in short, has made great and successful efforts to extend and improve the accommodation of the medical departments, to strengthen the teaching staff, and to encourage post-graduation and research work. A Diploma in Public Health is now also granted. Three very extensive general hospitals in the city afford exceptional opportunities for clinical instruction—namely, the Western Infirmary (600 beds), near the university, to which the Regius Professors are attached; the Royal Infirmary (688 beds); and the Victoria Infirmary (380 beds); while the Royal Mental Hospital, Gartnavel (500 beds), the Royal Hospital for Sick Children (275 beds), the Royal Maternity and Women's Hospital (114 beds), the Glasgow Eye Infirmary (100 beds), the Ophthalmic Institution (35 beds), the fever hospitals at Belvidere (680 beds) and Ruchill (540 beds), and other institutions afford facilities for the practical study of special branches. The large general hospitals of the parish council are now also available for clinical instruction in medicine and surgery. Information regarding post-graduate study will be found at page 419.

Bursaries.—Bursaries confined to the Medical Faculty amount in annual value to about £1,000, while bursaries in any faculty, amounting to about the same annual sum, may be held by students of medicine, a number of both sets being open to women. Several valuable scholarships may be held by medical students who have graduated in arts.

The following bursaries are open to undergraduates of both sexes: The Gibson Bursary, annual value £36, tenable for four years. This is open to medical students who are preparing for service as medical missionaries in connexion with the Church of Scotland, and will be awarded to the eligible candidate who has gained the highest number of marks in the First Professional Examination. The Arbroath Bursary, annual value £40, tenable for three years, is awarded by the Senate, on the recommendation of the Faculty of Medicine, to the student who is of the highest merit among the candidates, as shown by their class records and their performances in the First and Second Professional Examinations. One Logan Bursary, annual value £16, tenable for four years; appointment by the Senate. Six Lorimer Bursaries (each £20 and tenable for one year) are awarded to the best students in each of the following classes: botany, zoology, physics, chemistry, anatomy, physiology. The Macintosh Mental Science Bursary in

medicine, of the value of £31, is awarded annually to the student (of either sex) attending the class of insanity who stands first in an examination in that subject, the bursar to continue the practical study of the subject to the satisfaction of the Faculty of Medicine. The Gardiner Bursary, annual value £14, tenable for two years, will be awarded after the autumn professional examination to the candidate who has passed in physiology at the Second Professional Examination, and whose aggregate of marks in that subject and in chemistry and physics of the First Professional Examination is the highest. Of the eight James A. Paterson Bursaries two are awarded each year; they are of the value of £30 and £20 respectively, and are tenable for four years; examination in mathematics and natural philosophy in June for students entering the first and second years of medical study. The following are tenable in any faculty: Four Nivison Bursaries (each £75 and tenable for four years), two Pratt Bursaries (each £20 and tenable for four years), and two Taylor Bursaries (each £10 and tenable for four years). Andrew and Bethia Stewart Bursaries (£50 each, tenable for three years); candidates must have taken the M.A. degree of Glasgow. There is a special examination. Nine Glasgow Highland Society's Bursaries, for students of Highland descent, of the annual value of £25, and tenable for five years; two vacant each year.

The Carnegie Trust for the Universities of Scotland is empowered to pay the whole or part of the university ordinary class fees of students of Scottish birth or extraction, under conditions given in the *University Calendar*, and summarized at page 397 of this issue. The Dobbie Smith Gold Medal is awarded for the best essay on a prescribed subject within the science of botany. The Brunton Memorial Prize of £20 is awarded annually to the most distinguished graduate in medicine of the year, and the West of Scotland R.A.M.C. Memorial Prize to the candidate for the degrees of M.B., Ch.B. who obtains the highest aggregate marks in medicine, surgery, and midwifery in the Final Examinations. The University Commissioners have issued an ordinance to make regulations for the admission of women to certain bursaries, scholarships, and fellowships. Scholarships and fellowships are offered by the Carnegie Trust in science and medicine for post-graduation study. There are also four McCunn Medical Research Scholarships (two of £200 and two of £400) for graduates in medicine of the Scottish universities; one Faulds Fellowship for Research in Medical Science of approximately £200 for three years; and one Strang Steel Scholarship value £160 for one year. There is, in addition, "The Captain H. S. Rankin, V.C., Memorial Prize" in Pathology.

Fees.—The matriculation fee for each year is £2 2s. In most cases the fee for each university class is £6 6s., but in some cases it is £4 4s. For hospital attendance at the Western Infirmary students pay £12 12s. for a perpetual ticket, or £1 11s. 6d. for a single term ticket, with an additional fee of £5 5s. for each winter and £2 12s. 6d. for each summer clinical course. The fees are the same at the Royal Infirmary. The university fees for the four professional examinations total £34 13s. For the whole curriculum the fees for matriculation, class attendance, hospital attendance, and professional examinations amount to about £250.

For further information apply to the Registrar, Glasgow University.

QUEEN MARGARET COLLEGE.—In this, the Women's Medical School of the University of Glasgow, the courses of study, degrees, regulations, fees, etc., are the same as for men. Women students have their own buildings, with classrooms, reading rooms, library, etc. They are taught in some classes apart from male students, in others together with them, but in either case have all the rights and privileges of university students. Their clinical studies are taken in the Royal Infirmary, the Western Infirmary, and the Victoria Infirmary; also *inter alia* in the Royal Hospital for Sick Children, the Glasgow Ear Hospital, the Royal Asylum, Gartnavel, Hawkhead Asylum, the Ophthalmic Institution, the City of Glasgow Fever Hospitals, Belvidere and Ruchill, and the Glasgow Royal Maternity and Women's Hospital.

Scholarships.—The Arthur Scholarship, annual value £20, tenable for three years. Open to competition by medical students of first year at the First Professional Examination in October, 1928. This scholarship is restricted to women medical students.

Full information can be obtained from the Mistress, Queen Margaret College, Glasgow.

Board for Students.—University houses of residence for women students, Queen Margaret Hall and Robertson Hall, are situated near the College. The cost of board and residence is from 32s. 6d. to 42s. a week, according to accommodation. Applications to be made to the Wardens. Another hostel near the College is South Park House, Ann Street, belonging to the Student Christian Movement, and open to women students of all colleges in Glasgow. Cost of board is from 28s. to 30s. weekly. Applications to be made to the Warden.

ST. MUNGO'S COLLEGE.—This is the Medical School of the Royal Infirmary, which is the largest general hospital in Glasgow. The Infirmary is situated in Cathedral Square, Castle Street, and has car communication with every part of the city. St. Mungo's College is in the Infirmary grounds, and affords full courses in all the subjects of the medical curriculum, and in all the medical subjects of the dental curriculum.

The Infirmary has (including the ophthalmic department) over 700 beds. There are special beds and wards for diseases of women, of the throat, nose, and ear, venereal diseases, burns, and septic cases. In the out-patient department in 1925 over 51,000 patients were treated. In addition to the large medical and surgical departments, there are departments for special diseases—namely, diseases of women, of the throat and nose, of the ear, of the eye, of the skin, and of the teeth. There is also a fully equipped electrical pavilion, with the latest and most improved apparatus for diagnosis and treatment.

Appointments.—Five house-physicians and eleven house-surgeons, who must be fully qualified, are appointed every six months, and board in the hospital free of charge. Clerks and dressers are appointed by the physicians and surgeons. As many cases of acute diseases and accidents of a varied character are received, these appointments are very valuable.

Fees.—The average class fee is £3 3s. for summer classes and £4 4s. for winter classes. The fees for all the lectures, practical classes, and hospital attendance necessary for candidates for the diplomas of the English or Scottish Colleges of Physicians and Surgeons amount to about £120. The classes are open to male and female students.

A syllabus of classes can be obtained on application to the Secretary to the Medical Faculty, St. Mungo's College, 86, Castle Street.

THE ANDERSON COLLEGE OF MEDICINE.—This school provides education in all subjects of the curriculum for both medical and dental students. The school buildings are situated in Dumbarton Road, immediately to the west of the University and Western Infirmary. The hospital practice and clinical lectures are provided in the Western or Royal Infirmary; pathology in the Western or Royal Infirmary; vaccination and dispensary practice in the Western or Royal Infirmary Dispensary. These classes are recognized by all the licensing corporations in the United Kingdom, also by the Universities of London, Durham, Glasgow, and Edinburgh (the latter two under certain conditions stated in the school Calendar). The courses (lectures and laboratory) in public health are recognized by the Scottish Licensing Board, the Universities of Oxford, Cambridge, and London, and the London and Irish Colleges.

Fees.—The fees for the lectures and practical work required by ordinary students range between 2 and 5 guineas a session. In the Public Health Department the fee for a six months' course is £14 14s. The Carnegie Trust pays the fees of students at Anderson College on conditions regarding which particulars may be obtained from the Secretary, Carnegie Trust Offices, Edinburgh.

A Calendar will be sent on receipt of a postcard by the Secretary to the Medical Faculty, the Anderson College of Medicine, Glasgow, W., who will forward any further information which may be desired.

The Royal Samaritan Hospital for Women, Glasgow, with 160 beds, offers facilities for clinical instruction in the diseases peculiar to women. A university lectureship, the Royal Samaritan Lectureship in Gynaecology, is associated with the hospital. The lecturer is Dr. David Shannon. Particulars may be obtained from Mr. T. Mason Macquaker, M.A., Secretary, 149, St. Vincent Street, Glasgow.

ST. ANDREWS AND DUNDEE.

THE medical departments in these two teaching centres cater specially for students proceeding to the degrees of the University of St. Andrews, but admit other students as well. In the former city the United College provides education in all subjects for the first two years. In Dundee, University College provides for the needs of students from the beginning to the end of the five years' curriculum. Its buildings are modern, and contain fully equipped laboratories. The clinical work of the school is facilitated by various institutions. The class fees are from £6 6s. to £5 12s. 6d. for systematic classes, and from £4 14s. 6d. to £4 4s. for practical classes. The hospital ticket is £1 8s. for three months, £4 4s. a year, or perpetual, £13 6s. 8d. in one sum. The inclusive or

composition fee for the curriculum is £182. In connexion with both institutions there are bursaries and scholarships of considerable value, which are awarded after competitive examination. Information as to these can be obtained from the Secretary of the University of St. Andrews. Information regarding the clinical facilities may be obtained from the Dean of the Medical Faculty, Medical School, Dundee.

Clinical Work.

Good opportunities for clinical work are afforded by the Dundee Royal Infirmary, the instruction given thereat being recognized for purposes of graduation by all the Scottish universities, the University of Cambridge, the University of London, the National University of Ireland, and by the Royal Colleges of England and Scotland.

IRELAND.

THERE is a choice of six schools for those pursuing their medical studies in Ireland. For clinical instruction the choice is equally satisfactory and varied, though the hospitals themselves are comparatively small. Some account of the schools follows.

DUBLIN.

School of Physic.

THIS school is in Trinity College, Dublin, and is carried on under the joint auspices of the University of Dublin and of the Royal College of Physicians of Ireland, the King's professors of institutes of medicine (physiology), practice of medicine, materia medica, and midwifery being appointed by the latter. Clinical instruction is given at Sir Patrick Dun's Hospital, and some twelve other metropolitan hospitals and asylums are recognized by the Board of Trinity College. The courses of instruction are open to all medical students, whether they belong to the university or not.

The Schools of Surgery.

These are schools carried on in Dublin under the supervision and control of the Council of the Royal College of Surgeons. They are formed of the College's own school, combined with two famous old medical schools—Carmichael and Ledwich; they are attached to the College by charter. The buildings contain spacious dissecting rooms, special pathological, bacteriological, public health, chemical, and pharmaceutical laboratories. Advantage can be taken of the lectures and instruction afforded by students otherwise unconnected with the College.

Prizes.—Among the prizes annually awarded are: The Barker Anatomical Prize (£26 5s.); the Carmichael Scholarship (£15); the Mayne Scholarship (£8); the Gold Medal in Surgery, the Stoney Memorial Gold Medal in Anatomy, the H. Macnaughton Jones Gold Medal for Midwifery and Gynaecology; class prizes, accompanied by silver medals, will also be given in each subject.

A prospectus can be obtained post free on application to the Registrar, Royal College of Surgeons, Dublin.

University College, Dublin.

This is one of the constituent colleges of the National University of Ireland. The arrangements for the teaching of medical students from beginning to end of the curriculum are adequate. Applications for other information may be addressed to the Secretary and Bursar, University College, Dublin.

Clinical Work.

There are numerous well arranged hospitals in and around the city, and almost all of these are recognized for teaching purposes by the Conjoint Board of Ireland, the University of Dublin, the National University of Ireland, and by like bodies elsewhere in the British Isles. Among them are the Mater Misericordiae Hospital, with 345 beds; Dr. Steevens's Hospital at Kingsbridge, with 150; Meath Hospital and County Dublin Infirmary, with 160; Mercer's Hospital, close to Trinity College, with 120; the Royal City of Dublin Hospital, with 124; the Adelaide Hospital, with 140; the Royal Victoria Eye and Ear Hospital, with 100 beds; Sir Patrick Dun's, which has a direct connexion with the School of Physic, and the combined institutions formed by the Hardwicke Fever Hospital, the Richmond Surgical Hospital, and the Whitworth Medical Hospital, with an aggregate of 230 beds.

As for the famous Dublin medical institution known as the Rotunda Hospital, this practically consists of two distinct hospitals, and is believed to be the largest combined maternity and gynaecological hospital in the British Isles. It receives nearly 3,000 patients every year, and apart from ordinary out-patient work of a gynaecological order, annually attends some 2,000 women at their own homes during their confinement. It possesses residential quarters for students, and, taken as a whole, offers exceptional opportunities for study both to ordinary students and to medical graduates of any nationality.

Two other important obstetric and gynaecological hospitals in Dublin are the Coombe Lying-in Hospital and the National Maternity Hospital. During the year ending December 31st, 1926, the number of cases dealt with in the Coombe Lying-in Hospital were as follows: Intern maternity department, total admissions, 962; intern maternity department, total deliveries, 927; extern maternity department, total cases treated, 1,552; gynaecological department, number of operations, 294. The practice of the hospital is attended by large numbers of students, post-graduates, and nurses.

At the National Maternity Hospital, Holles Street, Dublin, during the year ending March 31st, 1927, there were admitted to the maternity department 952 patients, and to the gynaecological department 356; 744 calls were received in the extern obstetrical service; 848 patients were delivered in the hospital, and 664 in their homes; 323 operations were performed. During the year 67 students and post-graduates and 30 nurses availed themselves of the teaching facilities of the hospital.

BELFAST.

THE Medical School is part of the Faculty of Medicine of Queen's University, Belfast, and provides a complete medical curriculum for all purposes. The laboratories in connexion with the departments of bacteriology, biochemistry, biology, chemistry, physiology, pathology, anatomy, physics, and materia medica are all excellent, and there is a students' union which gives students the advantages of dining rooms, reading rooms, a library, and various recreation rooms. Women are eligible as students. Clinical instruction is given at the Royal Victoria Hospital, which was rebuilt a few years ago and has 300 beds, and the Mater Infirmorum Hospital, which has 150 beds. Other hospitals open to the students of the university are: the Maternity Hospital, the Ulster Hospital for Women and Children, the Hospital for Sick Children, the Ophthalmic Hospital; the Benn Ulster Eye, Ear and Throat Hospital; the Union Infirmary and Fever Hospital; the Fever Hospital, Purdysburn; the District Lunatic Asylum, the Samaritan Hospital, Forster Green Hospital for Diseases of the Chest, and the Belfast Hospital for Skin Diseases.

Scholarships.—(1) Eight, of the value of £40 each, are assigned as Entrance Scholarships in the Faculties of Arts, Science, and Medicine, tenable for one year; (2) fourteen Professional Scholarships, value from £15 to £40 each; (3) one Hutchinson Stewart Scholarship, £12, in mental diseases; (4) one Mackay Wilson Travelling Scholarship, £100, awarded triennially; (5) Isabella Tod Memorial Scholarship, tenable for three years, awarded triennially to a woman student; (6) Magrath Clinical Scholarship, awarded annually, value about £112; (7) two Musgrave Studentships of £200 in Physiology and Pathology. There is also a post-graduate research fund, open to all graduates of not more than three years' standing. Gold medals are awarded at the M.D. examination.

Fees.—The cost of the curriculum intended for students proceeding to the degrees of the Queen's University of Belfast is, approximately, £200. This includes examination fees and a perpetual ticket for attendance at the Royal Victoria Hospital or the Mater Infirmorum Hospital, and fees for the special hospitals. The course for the Conjoint Board costs about the same amount.

The Regulations of the Medical Faculty, containing full information, can be obtained on application to the Secretary, Queen's University, Belfast, price 4d.

UNIVERSITY COLLEGE, CORK.

THIS institution, formerly known as Queen's College, Cork, is one of the constituent colleges of the National University. It holds examinations for all the faculties of that university, in addition to continuing the work which it has hitherto performed—namely, that of providing education adapted to the needs of medical students at all stages of their career. Its first aim is to fit students for the degrees of the

National University, but students proceeding for the examinations of the Conjoint Board of England, Scotland, or Ireland, the Society of Apothecaries of London, or the Apothecaries' Hall of Ireland, or London University, can arrange the courses of lectures which they attend, and the order in which they attend them, to meet the requirements of those bodies. Certificates of attendance at the college courses are also accepted by the University of Cambridge. Clinical instruction is given at the North and South Infirmaries (each 100 beds) and at the Cork Union Hospital (1,200 beds). Students can also attend the Mercy Hospital (130 beds), the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglinton Lunatic Asylum. The session extends from October to June.

There is a Dental School in which the degree of Bachelor of Dental Surgery of the National University of Ireland can be obtained. There is a large well equipped dental hospital in connexion with the school.

Scholarships.—About £3,000 is available annually for scholarships in the College. Particulars as to each of them can be obtained on application to the Registrar.

Fees.—The fees for the lectures and hospital attendances required by the National University of Ireland course, including examination fees, come to about £170.

Further information can be found in the Calendar or obtained on application to the Registrar.

UNIVERSITY COLLEGE, GALWAY.

THIS institution is one of the constituent colleges of the National University of Ireland, and includes Faculties of Art, Science, Law, Celtic, Engineering, Commerce, and Medicine. The college buildings are well lighted and well ventilated, and contain dissecting rooms, an anatomical theatre, and laboratories for the study of physiology, chemistry, physics, and other departments of medical science. For pathology and chemistry new laboratories are now provided. It has good grounds surrounding it, and there are many arrangements, such as a library, a college union, and an athletic union, for the benefit of those belonging to the Medical Faculty, as well as for students in other departments of the college. The clinical teaching, which is recognized as qualifying not only for the degrees of the National University, but for those of London University and the diplomas of the various colleges in the three kingdoms, is carried on at the Galway Central Hospital and the Galway Tuberculosis Hospital. The Galway Central Hospital is a general hospital, and at the two hospitals students have ample opportunities of studying zymotic and chronic diseases. The Central Hospital has a special ward for diseases of children. Each year the governing body offers about £1,500, and the County Councils of Connaught offer about £3,500, in scholarships. These scholarships are tenable in any faculty. Additional information regarding these scholarships can be obtained on application to the Registrar, and to the Secretaries of the Connaught County Councils.

CLINICAL HOSPITALS IN ENGLAND.

MANY hospitals in Great Britain and Ireland, though not connected with any medical school, open their doors either to those who have yet to be qualified, to those who are doing post-graduation work, or to both. The facilities they offer for gaining practical clinical experience are very great, and should not be overlooked. Their honorary staffs commonly make a point of giving such instruction as opportunity offers, and at those situated in the larger towns there are often appointments as clinical assistants to be obtained. In addition, they all have to offer, at shorter or longer intervals, appointments for resident medical officers, house-physicians, and house-surgeons. These are usually paid offices, which may be held for periods varying from six months to a year. Some of those situated in the great medical centres in the provinces, and in Scotland and Ireland, have already been mentioned in speaking of the medical schools in these localities; but it should be added that there are many other provincial hospitals where admirable work is done, and at which much valuable experience can be gained by both senior and junior students, and by those already qualified. Cases in point are the Royal Infirmary, Bradford; the Royal Sussex County Hospital, Brighton; the Royal United Hospital, Bath; the Kent and Canterbury Hospital; the Derbyshire Royal Infirmary; South Devon and East Cornwall Hospital, Plymouth; the Royal Albert Hospital and Eye Infirmary, Devonport; the Royal Devon and Exeter Hospital; the West of England Eye Infirmary, Exeter; the Gloucestershire Royal Infirmary and Eye Institution; the Royal Infirmary, Leicester; the County Hospital, Lincoln; the General Hospital, Northampton; the Norfolk and Norwich Hospital; the General Hospital, Nottingham; the Royal Portsmouth Hospital; the Royal Berks Hospital, Reading; the Royal South Hants and Southampton Hospital; the Staffordshire General Infirmary, Stafford; the North Staffordshire Infirmary at Hartshill; the Royal Hants County Hospital, Winchester; the Wolverhampton and Staffordshire General Hospital; the County Hospital, York; and the Coventry and Warwickshire Hospital.

London Clinical Hospitals.

As for the hospitals in the metropolis, so many of these take a share in the giving of clinical instruction that it is worth while to classify them.

Children's Hospitals.—There are at least seven of these, the leader among them being the Hospital for Sick Children, Great Ormond Street, which has 240 beds. There are also the East London Hospital for Children, Shadwell, with 124 cots; the Queen's Hospital for Children, Bethnal Green, with 134; the Victoria Hospital for Children, Chelsea, with 104; the Belgrave Hospital for Children, which has a considerable out-patient department, but in-patient accommodation for only 40 children; the Paddington Green Children's Hospital, an institution of about the same size; and the Evelina Hospital for Sick Children, Southwark Bridge Road, with 76 beds. The largest and the oldest of the hospitals for both women and children is the Royal Waterloo Hospital for Children and Women, Waterloo Road, S.E.1.

Hospitals for Women.—Queen Charlotte's Maternity Hospital, Marylebone Road, with 70 beds and a residential college for students and practitioners, specializes in the teaching of midwifery. The Samaritan Hospital for Women, Marylebone Road, admits qualified practitioners as clinical assistants to both the in-patient and out-patient departments; demonstrations are given daily in both departments, the fees—payable in advance—being £3 3s. for three months; full particulars may be obtained from the secretary. In addition may be mentioned the Hospital for Women, Soho Square, whose teaching is confined to post-graduates in limited numbers; the Chelsea Hospital for Women, Arthur Street, Chelsea; and the Elizabeth Garrett Anderson Hospital for Women in Euston Road, the latter being in the nature of a general hospital so far as concerns the class of case treated.

Eye Hospitals.—The largest of these is the Royal London Ophthalmic Hospital (Moorfields), City Road. At this hospital two complete courses of instruction are given during the year—October to February and March to July—comprising the following subjects: anatomy, physiology, and optics; ophthalmic medicine and surgery—(1) external diseases, (2) motor anomalies and squint, (3) ophthalmoscopic conditions (weekly classes), (4) pathology; practical refraction classes; methods of examination (practical); operative surgery; practical pathology; practical bacteriology; *x*-ray and radiotherapy; clinical lectures; discussion classes. A fee of 24 guineas entitles the holder to one full five months' course (with the exception of practical pathology and practical bacteriology), together with a permanent ticket for the practice of the hospital. Fee for the practice of the hospital (permanent), £5 5s.; for three or six months, £3 3s.; for two months, £2 2s.; for one month, £1 1s. Gentlemen are eligible, under certain conditions, for the posts of chief clinical assistant, clinical assistant, and junior assistant. Clinical work takes place every morning at 9 o'clock, and operations at 10. An additional special course in the preliminary subjects (namely, anatomy, physiology, and optics) for the D.O.M.S. and other examinations in ophthalmology will be held immediately preceding the date of the examination. The fees for this course will be 12 guineas, or £5 5s. for any subject separately. Further particulars may be obtained from the Dean of the Medical School. Other eye hospitals are the Royal Westminster Ophthalmic Hospital near Charing Cross, the Royal Eye Hospital, Southwark, and the Central London Ophthalmic Hospital, Judd Street, W.C.1, each with about 40 beds.

Fever Hospitals.—The Metropolitan Asylums Board has under its control a good many institutions in and around London for the treatment of the more serious zymotic disorders; it makes special arrangements for the instruction of students in this subject, and grants certificates at the end of the courses. Detailed information should be sought from the Clerk to the Board, Victoria Embankment, E.C.4.

Chest Hospitals.—The largest of these is the Brompton Hospital for Consumption, which has 333 beds and a large sanatorium at Frimley with 150 beds. There is also the City of London Hospital for Diseases of the Chest, Victoria Park, with 175 beds, and the Royal Hospital for Diseases of the Chest, City Road, now amalgamated with the Royal Northern Hospital, Holloway Road.

Nose, Throat, and Ear Hospitals.—The institutions which confine their work to disorders of the throat, nose, and ear all make special arrangements for the benefit of senior and post-graduate students. They are the Metropolitan Ear, Nose, and Throat Hospital, Fitzroy Square; the Royal Ear Hospital, Dean Street; the Central London Throat, Nose, and Ear Hospital, Gray's Inn Road; and the Hospital for Diseases of the Throat, Golden Square—the last, which possesses 75 beds, being the largest of the four institutions.

Miscellaneous Special Hospitals.—Among these are the Bethlem Royal Hospital, St. George's Fields, S.E.1, which (like the Maudsley Hospital) confines its work to the treatment of mental diseases, and includes a department for nervous and early mental disorders; West End Hospital for Nervous Diseases, 73, Welbeck Street, W.1; St. Peter's Hospital for Stone and Urinary Diseases, Henrietta Street, Covent Garden; St. Mark's Hospital, City Road, which devotes itself to the treatment of diseases of the rectum, including cancer and fistula; the National Hospital for Diseases of the Heart in Westmoreland Street, W.1; St. John's Hospital for Diseases of the Skin in Leicester Square; the Hospital for Diseases of the Skin, Stamford Street, Blackfriars; and the National Hospital, Queen Square, W.C.1, an institution possessing 200 beds and a world-wide reputation.

Detailed information as to the teaching arrangements of all these institutions may be obtained on application to their secretaries.

WOMEN IN MEDICINE.

THE regulations of the General Medical Council and of the various universities and colleges set out in previous sections apply to women as to men.

Examinations.

Women are admitted to all the medical examinations of the following qualifying bodies: the Royal College of Physicians, London; the Royal College of Surgeons of England; the Society of Apothecaries of London; the Conjoint Boards in Scotland and in Ireland; and all the universities of Great Britain and Ireland. The Royal College of Physicians now allows women to be eligible for election as Fellows.

Medical Education.

The London (Royal Free Hospital) School of Medicine for Women, which is one of the constituent schools of the Medical Faculty of the University of London, is the sole school for medical education which admits women only. All the resident appointments at the Royal Free Hospital, of which there are twenty-seven yearly, are held by women. Arrangements are made for students of the school to obtain clinical instruction at the National Hospital for Nervous Diseases; the Royal London Ophthalmic Hospital (Moorfields); the Elizabeth Garrett Anderson Hospital; the South London Hospital for Women; and the Cancer Hospital. During the past year a large children's department under a physician for diseases of children has been added to the hospital. There is also a special orthopaedic department. Further particulars with regard to the London School of Medicine for Women will be found on page 407.

Women are also admitted to the following men's schools in London: University College Hospital (a limited number only); King's College Hospital; Charing Cross Hospital; and the Westminster Hospital. Further particulars about these schools will be found in the article on London Medical Schools at page 402 et seq. The medical schools of Birmingham, Bristol, Cardiff, Leeds, Liverpool, Manchester, Newcastle, and Sheffield admit women. In Scotland, the medical schools of Aberdeen, St. Andrews, Edinburgh, and Glasgow admit women, although they do not in every case afford them equal facilities with men. The Irish universities and colleges are open to women.

Openings for Medical Women.

The London School of Medicine for Women celebrated its jubilee in October, 1924. During the fifty-three years of its existence over 1,300 women have graduated from this school. At the present time most of them are engaged in active medical work. Unemployment is apparent in all professions, and applies to both sexes; it is asserted that medical women are rather more fortunate in this respect than women in other professions. In private practice they do increasingly well, and are reported to be in great demand as locumtenents for medical men and women.

The Public Health Service, and especially its department of Maternity and Child Welfare, provides openings for women. In addition nearly all the voluntary welfare centres in the country are officered by medical women. The rapid growth in recent years of maternity and child welfare centres has given women, to whom such work is peculiarly suited, an opportunity of participating in this important branch of preventive medicine. Under the Board of Education there are appointments for women as medical advisers and school medical inspectors. The London County Council has medical women as lecturers and examiners on the care of children, home nursing, health, and first aid. Many of the venereal disease clinics have at least one medical woman on the staff. A certain number of appointments as tuberculosis officer are held by women. Appointments are held by women as residents in general hospitals, hospitals for women and children, sanatoriums, infirmaries, fever hospitals, and asylums.

Particulars of the Colonial appointments which may be held by women in British West Africa and the Malay States can be obtained from the Medical Branch of the Colonial Office. Information regarding the women's medical service for India may be obtained from the honorary secretary, United Kingdom Branch of the Countess of Dufferin's Fund, c/o General J. B. Smith, India Office, Whitehall, S.W.1. Missionary societies also offer employment to medical women. Further particulars can, we understand, be obtained from Dr. Webb Anderson, Medical Missionary Association, 49, Highbury Park, London, N.5.

Equal Pay for Equal Work.

The British Medical Association was the first of all professional organizations to lay down the principle that no distinction should be made on the ground of sex as regards the emoluments to women members of the profession. Attempts are continually being made by public authorities to obtain the services of women doctors at lower salaries than those paid to men, and the Association looks to all medical women to help it in resisting such attacks upon the solidarity of the profession. In its constant efforts to maintain this principle the Association works in close co-operation with the Medical Women's Federation (9, Clifford Street, New Bond Street, W.1). In defence of the principle the British Medical Association has at various times fought—usually with success—Government departments and local authorities of all kinds. Where the authorities concerned have declined to recognize the justice of the claim that equal pay should be given for equal work the machinery, local and central, of the Association has been put into operation, and as a result the authority has generally seen fit to drop the proposed distinction between men and women practitioners or given up the attempt to fill the post. It is hardly necessary to add that the British Medical Association can only be successful in carrying out this policy if it receives the loyal support of all medical women.

DEGREES FOR PRACTITIONERS.

AT one time it was almost the universal custom for medical students educated in London and aiming at general practice not to seek a university degree, and as that custom still prevails to a considerable extent a large proportion of medical men in England possess diplomas or licences to practise but not degrees in medicine. This is a fact which they sometimes find reason to regret, and to such practitioners the following paragraphs may be of interest. It should be noted that the M.D.Brux. diploma, if obtained subsequently to June, 1886, is not registrable, and that the University of Brussels no longer holds special examinations for foreign medical practitioners.

UNIVERSITY OF DURHAM.

The degree of M.D. is granted by the University of Durham to registered practitioners of not less than fifteen years' standing, who have been qualified and in practice for that period, upon the following conditions, without residence: The candidate must be 40 years of age, and must produce a certificate of moral character from three registered medical practitioners. Should he not have passed

an examination in arts previous to the professional examination in virtue of which his name was placed on the *Register*, he is examined in classics and mathematics; if otherwise, he is required to translate into English passages from any one of the following Latin authors: Caesar, *De Bello Gallico* (first three books), Virgil *Aeneid* (first three books), or Celsus (first three books). Natives of India or the British Colonies are placed on the same footing as natives of Great Britain. Natives of India must produce evidence from an Indian university that they have passed within one year an examination in Latin.

Professional Examination.—The candidate must pass an examination in the following subjects: (i) Principles and practice of medicine, including psychological medicine, hygiene, and therapeutics; (ii) principles and practice of surgery; (iii) midwifery and diseases of women and children; (iv) pathology, medical and surgical; (v) anatomy, medical and surgical; (vi) medical jurisprudence and toxicology. Candidates are examined by means of written papers, clinically, and viva voce at the College of Medicine, Northumberland Road, Newcastle, and in the Royal Victoria Infirmary. The classical part of the examination may be taken separately from the professional on payment of a portion (£10 10s.) of the full fee.

The examinations are held twice a year, in June and December. Notice, accompanied by the fee and certificates, must be sent to the Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

Fees.—The fee is 50 guineas, which includes the degree fee; if a candidate fail to pass, 20 guineas are retained, but if he present himself again 40 guineas only are required.

University of Edinburgh.

At a meeting of the Edinburgh University Court on March 21st, 1927, a regulation for the examination for the degree of M.D. was adopted on the recommendation of the Senatus. The object of this new regulation is to provide an examination suitable for testing either persons who have been in general practice or those who have been occupying their time in research work. The examination is to consist of two parts—a major and minor. For those who have been doing clinical work the major part will be an examination in clinical medicine, including a practical and oral examination and a written paper in medicine and therapeutics, while the minor part will be a special branch of medical science or practice professed by the candidate and to be approved by the Faculty of Medicine. For those who have been doing research work or engaged in some special employment, the major part will consist of a special branch of medical science or practice professed by the candidate and approved by the Faculty, and the examination will include a practical and oral examination and a written paper in the subject proposed. The minor part for these persons will be an examination in clinical medicine.

The Swiss Universities.

The Universities of Lausanne and Berne have arrangements which permit British practitioners to proceed to the M.D. degree. At Lausanne, which has a large Medical Faculty, the British practitioner has to produce (1) a certificate of matriculation in a British university, or of having passed a preliminary examination recognized by the General Medical Council for the purposes of registration as a medical student; (2) a certificate of a degree or diploma qualifying for practice in the United Kingdom and the certificate of registration as a medical practitioner in the United Kingdom. He must then undergo a viva voce examination in any three subjects of the final medical examination which he may select. Next he must present a thesis for the doctorate, prepared and completed in one of the Lausanne clinics under the direction of one of the professors of the Faculty of Medicine. Residence for a semester (October to March or April to July) is obligatory. The fees are: on matriculation 20 francs; on inscription for the viva voce examination 50 francs; on presentation of thesis 200 francs; for diploma and graduation 25 francs; for courses of lectures and laboratory instruction 80 francs; the printing of the thesis costs from £7 to £12. Applications for admission should be made to the Dean of the Medical Faculty, Ecole de Médecine, Place de l'Ours, Lausanne. An official publication (*Guide de l'Etudiant*) is issued in October and April, and may be obtained (price 50 centimes) from M. F. Haeshel-Dufey, 3, Rue Centrale, Lausanne. The university degree of M.D. (Lausanne or Berne) alone does not confer the right to practise in Switzerland, for which the possession of the State or Federal Diploma is necessary. Neither degree is registrable in this country. Dr. C. A. H. Franklin (56, Southborough Road, Bickley, Kent), honorary secretary of the Lausanne Medical Graduates, will supply further information.

POST-GRADUATION STUDY.

THERE has not hitherto been in this country any large and fully organized centre for post-graduate instruction; the situation has been materially changed by the statement made by the Minister of Health in the House of Commons on June 28th. Some six years ago the then Minister of Health (Dr. Christopher Addison) appointed a committee, under the chairmanship of the Earl of Athlone, to investigate the needs of medical practitioners for further educational facilities in London. That committee made two recommendations: the first was that such a school attached to a hospital centrally situated in London should be devoted solely to post-graduate medical education, and that it should be a school of the University. The second recommendation was that an institute or school of State medicine should be established in London and should receive substantial financial assistance from the Treasury. The second recommendation was quickly realized, and the School of Hygiene and Tropical Medicine was brought into existence, with a Treasury guarantee for its maintenance. The Rockefeller Foundation made generous contributions for the erection of a fine building, the skeleton of which is now rising in the University quarter of London. Dr. Andrew Balfour is the director, and appointments to the professorial staff are being made. Further particulars about this school will be found at page 420. No steps, however, were taken to carry out the first recommendation of the committee until about a couple of years ago, when the Minister of Health appointed a departmental committee to "draw up a practicable scheme of post-graduate medical education centred in London." This committee has not yet reported, but in his statement to the House of Commons Mr. Neville Chamberlain made it clear that in his own mind it was practically settled that the school should be organized in connexion with the West London Hospital at Hammersmith, where a post-graduate college has existed on a comparatively small scale for a number of years. The new scheme contemplates a hospital containing about 400 beds, with the necessary lecture rooms and laboratories.

London already possesses several institutions which seek to provide for the wants of graduates who desire refresher classes, instruction and experience in special subjects, or, being in a service, have to prepare themselves for examinations to obtain promotion. In addition, many of the undergraduate schools will give facilities for attending classes and demonstrations, but they are for the most part utilized only by their own old students. It is generally agreed, however, that instruction for post-graduates cannot conveniently be provided on any large scale in an institution primarily established for the teaching of undergraduates.

At some hospitals in London—and this applies in particular to the special hospitals—it is possible to obtain clinical assistantships. Such appointments, especially those at the more famous institutions, are eagerly sought after, and those whose ambitions lie that way commonly find it advisable to seek an association with the hospital by becoming a regular student, as is often possible.

The Fellowship of Medicine, founded in 1918, and amalgamated with the Post-Graduate Medical Association in 1919, has an office generously placed at its disposal by the Royal Society of Medicine (1, Wimpole Street, W.1). Courses of instruction at various hospitals scattered through London are organized, and a list of hospitals which welcome post-graduates, together with the names of

the teachers, is kept. Permanent schools for those who desire to revise or increase their medical knowledge exist in the West London Post-Graduate College and the North-East London Post-Graduate College. In the provinces the Universities of Oxford, Birmingham, Bristol, Manchester, and Sheffield have organized courses. At Manchester it is hoped to start a central scheme of training, taking the form, perhaps, of a definite post-graduate school. In Scotland considerable progress has been made. Edinburgh receives graduates from many schools in the Dominions, as well as in this country. At Glasgow teaching is provided under three schemes: a general course of four weeks in August and September; special courses; and clinical assistantships for periods of three months. In the University of Aberdeen the Faculty of Medicine has approved a three months' course from April to June; and in relation with the University of St. Andrews courses are given by the staff of the James Mackenzie Institute for Clinical Research.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.

The Fellowship of Medicine has arranged regular courses in general medicine and surgery, including special departments, each lasting two weeks; the fee for each course is 3 to 5 guineas. Courses in diseases of chest, children, heart, nervous system, throat, nose and ear; dermatology; electrotherapy; gynaecology; proctology; psychological medicine; tropical medicine; urology and venereal diseases are given from time to time at the special hospitals in association with the Fellowship of Medicine. The Fellowship Programme contains a diary of the arrangements available for post-graduates in various general and special hospitals in London. Practical courses in obstetrics and child welfare are arranged throughout the year; the duration of each course is one week. The programme for the immediate future includes a two weeks' course in general medicine and surgery, from September 19th to October 1st, at the Westminster Hospital. There will also be special courses in diseases of children at the Queen's Hospital from September 12 to 24th; in ophthalmology at the Royal Westminster Ophthalmic Hospital from September 12th to October 1st; in psychological medicine at the Bethlem Royal Hospital from September 6th to October 1st; and a course in orthopaedics at the Royal National Orthopaedic Hospital from September 19th to October 1st. The offices of the Fellowship are, by kind permission of the Royal Society of Medicine, at No. 1, Wimpole Street, W.1. (telephone, Mayfair 2236). The secretary is in attendance daily from 10 a.m. to 5 p.m., excepting Saturday. The annual subscription for membership of the Fellowship of Medicine and Post-Graduate Medical Association has been fixed at a minimum of 10s.

The Fellowship arranges during the autumn and winter sessions a series of lectures. Special clinical demonstrations in medicine, surgery, and ophthalmology are arranged also weekly from October onwards. Syllabuses will be sent regularly on application.

WEST LONDON POST-GRADUATE COLLEGE.

The work of this institution is carried on at the West London Hospital, the first in London to devote its clinical material solely to the instruction of qualified medical men. The college started in 1895; it is provided with lecture, reading, writing, and class rooms, and accommodation of all sorts for the convenience of post-graduate students. The work of the college is eminently suitable for men in general practice and officers in the services who wish to revive their general clinical knowledge.

As for ward work, the students accompany the senior staff on their visits to the wards at 2.30 p.m. daily, and also go round with the resident medical officers in the morning. Out-patient work begins at 2 p.m. This department is large, and affords ample facilities for post-graduates to see and examine patients. There are the usual special departments. Post-graduates are appointed to act as clinical assistants for three or six months, no charge being made. Special practical classes are held in medicine, general practical surgery, gastro-intestinal surgery, medical and surgical diseases of children, analysis of blood and urine, cystoscopy, venereal diseases, tropical diseases, retinoscopy, ophthalmic operative surgery, and, when material is available, in operative surgery. The size of the classes is limited. A special clinic for the treatment of venereal diseases (male and female) is held every evening (Saturdays included) at 5.30. Graduates are admitted to the work of the clinic free, and certificates of satisfactory attendance and work are given.

Operations take place at 2 p.m. daily, the surgeons often availing themselves of the assistance of the graduates, and in any case making arrangements so that they can readily see what is going on. The anaesthetists give instruction in the administration of anaesthetics, including spinal analgesia, on the operating days, students being allowed to administer them under supervision, while special classes are held in each session. The pathological laboratory is in charge of a pathologist who attends every day.

Demonstrations are ordinarily given in the morning by the assistant physicians and surgeons, and by the medical and surgical registrars.

Fees.—Hospital practice, including all ordinary demonstrations and lectures, £1 11s. 6d. for one week, £4 4s. for one month, £7 7s. for two months, £9 9s. for three months, £15 15s. for six months, £23 12s. 6d. for one year, and £45 for a life ticket. Instruction in the administration of anaesthetics is given at the rate of £3 3s. a month.

The certificates of the school are recognized by the Admiralty, the War Office, the Colonial Office, the India Office, and the University of London (for higher degrees). A prospectus can be obtained on application to the Dean.

NORTH-EAST LONDON POST-GRADUATE COLLEGE.

The headquarters of this post-graduate school are situated at the Prince of Wales's General Hospital, Tottenham, N.15, in the midst of this densely populated North London district. It contains 200 beds, and is within a few minutes' walk of South Tottenham station, on the London, Midland, and Scottish Railway, and Seven Sisters and Tottenham Hale stations, on the London and North-Eastern Railway. It is readily accessible by electric tram from Finsbury Park and Hackney, and from Dalston, Edmonton, and other parts of North London.

The college is in association with the Fellowship of Medicine and Post-Graduate Medical Association, and is recognized by the Admiralty and India Office for the purpose of study leave, and by the University of London as a place for advanced study for the M.D. and M.S. degrees; the course of practical teaching of bacteriology is approved by the University of Cambridge for its Diploma in Public Health, and there are ample arrangements for the convenience of men who are thus working, or who, being in active practice, are desirous of getting themselves into touch with modern methods. The hospital as a whole affords excellent facilities for qualified medical practitioners who wish to take part for a time in the work of an active general hospital, or to obtain special instruction in the several branches of medicine and surgery, since it is open to them to study diseases of the eye, ear, throat, nose, skin, fevers, children's diseases, psychological medicine, dental surgery, radiography, the application of electricity in disease, and the administration of anaesthetics. Throughout the sessions into which the year's work is divided, clinics, lectures, and demonstrations are given by members of the teaching staff. Operations are performed every afternoon of the week except Saturday. Special vacation or intensive courses are held at intervals throughout the year, each lasting two weeks, clinical instruction being arranged for each hour of each day.

Fees.—Two guineas for a three months' course of study in any one department, which may be begun at any time; a fee of 5 guineas admits to the whole practice of the hospital for a similar term (one month 2 guineas, and one year 10 guineas), and a perpetual ticket for the practice of the hospital may be obtained for 15 guineas.

The winter session will be opened about the middle of October as regards clinical lectures, but the clinical work of the hospital is carried on continuously.

Additional information can be obtained from the Dean of the Post-Graduate College, at the hospital.

MANCHESTER POST-GRADUATE COURSES.

The Faculty of Medicine of the University of Manchester has arranged courses in preparation for the diplomas in psychological medicine, in public health, bacteriology, and

veterinary State medicine. There are classes also for certificates in factory and school hygiene and in venereal diseases. The Faculty of Medicine has also instituted courses to meet the requirements of graduates desiring to refresh their knowledge or to pursue further their studies in various special branches. The arrangements are in the hands of a committee consisting of certain members of the faculty, of representatives of hospitals, and of the medical officer of health for Manchester. Full particulars can be obtained from the Dean of the Medical School, the University, Manchester. A whole-time intensive course in general medicine and surgery will begin on September 12th, and continue until September 30th. An intensive course in obstetrics and gynaecology will be given from October 1st to October 8th, and an advanced course in diseases of the digestive system from October 10th to December 16th. Part-time courses in certain subjects have also been arranged, including tuberculosis and diseases of the ear, nose, and throat. A limited number of clinical assistantships are offered in the medical, surgical, and special departments of the Manchester Royal Infirmary, the Ancoats Hospital, and certain special hospitals for one, two, or three months, or longer.

Courses for Medical Graduates at Bristol.

The University of Bristol provides courses of post-graduate study for practitioners. Details of set courses at the Royal Infirmary and General Hospital are announced locally. In addition, practitioners may become clinical assistants in medicine, surgery, or special subjects for periods of a month or more.

The university also holds courses of demonstrations in outlying centres in the West of England. Resident practitioners form themselves into a committee and consider the type and extent of demonstrations required. The university furnishes the lecturers and makes all the necessary arrangements. All inquiries should be addressed to the Director of Post-Graduate Studies, Pathological Department, Bristol University.

Daily Post-Graduate Study.—For those who are able to devote several hours each day to hospital practice the university offers special facilities for post-graduate work. Qualified medical practitioners may be appointed as clinical assistants for a period of one or more months. They may act as assistants, if times permit, in more than one department and in any of the hospitals during their period of study. They will be entitled to the use of the clinical laboratories and medical library, and have the right to attend in all departments, including operations, post-graduate and ordinary clinical demonstrations, and *post-mortem* examinations.

Post-Graduate Clinical Work.—Demonstration courses with weekly lectures are held during May, June, and July. All inquiries and applications for admission should be addressed to the Director of Post-Graduate Studies (Clinical Section), Pathological Department, University of Bristol, who can be seen on any day by appointment at the Pathological Department.

Further information as to scholarships, curricula, and fees can be obtained from the Dean of the Faculty of Medicine, or the Registrar of the University, Bristol.

Newcastle-on-Tyne.

For the year 1927-28 the following post-graduate courses have been arranged by the College of Medicine, Newcastle-on-Tyne (University of Durham):

1. General courses in clinical medicine, surgery, and pathology at the Royal Victoria Infirmary, meeting once weekly for ten weeks. One course will be held from October to December, and one from April to June.

2. Special courses of clinical instruction meeting once weekly for ten weeks in the following subjects: Gynaecology, diseases of the eye, diseases of the throat, nose, and ear, diseases of the skin, venereal diseases, neurology.

Special courses in midwifery will be held at the Princess Mary Maternity Hospital.

3. An intensive course of fourteen days' duration in the early part of the Summer Vacation, 1928.

4. In addition to the regular post-graduate courses practitioners may attend the ordinary medical and surgical practice of the Royal Victoria Infirmary for specified periods.

Edinburgh Post-Graduate Courses.

In connexion with the University and Royal Colleges post-graduate courses are arranged every year, from about the middle of July to about the middle of September, comprising: (*a*) A course in obstetrics and gynaecology, generally held from about the middle of July: this year a restricted course only in clinical obstetrics is being given; (*b*) a course on diseases of children: this year a restricted course only is being given during the period of the general courses; (*c*) a general practitioners' course; (*d*) a general surgical course. Courses (*c*) and (*d*) extended for four weeks from August 15th to September 10th. Similar courses are held each year.

The course in obstetrics and gynaecology comprises instruction in clinical midwifery and clinical gynaecology, obstetrics and gynaecological pathology, child welfare and ante-natal clinics, etc.

The course on diseases of children comprises clinical demonstrations and systematic lectures dealing with the diagnosis and treatment of the common and important diseases met with in medical practice, and including the dieting of infants and children. The general practitioners' course includes lecture demonstrations, and, where possible, practical instruction on medical anatomy, medical side-room work, examination of the blood, *x*-ray and electrical therapy, morbid anatomy, and *post-mortem* examinations; clinical instruction in medicine, surgery, gynaecology, diseases of children, diseases of the skin, and infectious diseases; and special instruction in the diseases and methods of examination of the nervous, circulatory, respiratory, alimentary, and renal systems, and in diseases of the ductless glands. The general surgical course includes lecture demonstrations on surgical anatomy, surgical pathology, and surgical *x*-ray diagnosis; clinical instruction in surgery at the Royal Infirmary and Royal Hospital for Sick Children; clinical instruction in venereal diseases; surgical out-patients, surgical and gynaecological operations and special instruction in abdominal and genito-urinary and other branches of surgery.

A series of special lectures, open to all graduates, is delivered thrice weekly, on subjects of general medical and surgical interest, including recent advances in treatment. Among the special courses also arranged are: examination of the blood, vaccine therapy, clinical chemistry, diseases of the ear, nose, and throat, and venereal diseases.

Particulars regarding the courses, dates of commencing, fees, etc., may be had on application to the Honorary Secretary, Post-Graduate Courses in Medicine, University New Buildings, Edinburgh.

Post-Graduate Medical Teaching in Glasgow.

Organized post-graduate medical teaching is available in Glasgow under the auspices of the Post-Graduate Medical Association. This association is composed of practically all the teaching institutions in Glasgow and the various teachers giving post-graduate instruction, and its business is managed by a board elected periodically by them. The chairman of the board is Principal Sir Donald MacAlister, Bt., and the vice-chairman Sir Hector C. Cameron. During the winter months special courses in various subjects are conducted, and from November till May there is a series of weekly demonstrations specially designed for local practitioners. A comprehensive scheme of clinical courses is carried out during the summer months, from June till October, and arrangements have also been made whereby a limited number of graduates may become attached to wards or out-patient departments nominally as clinical assistants for definite periods throughout the year. As such they work under the direct supervision of the physician or surgeon in charge, and carry out such detailed investigations as directed.

A general medical and surgical course is now held each year during the last two weeks of August and the first two weeks of September, which is arranged to include most of the subjects of interest to the general practitioner. This year the course is being conducted from August 16th to September 11th. The forenoons are occupied with general medicine and surgical diagnosis and minor surgery, in the Victoria Infirmary and in the Western Infirmary.

In the afternoons special subjects are dealt with in the special hospitals, and in the special departments of the general hospitals, two subjects being considered each afternoon. On the four Saturday forenoons tuberculosis and infectious fevers are demonstrated at Ruchill Fever Hospital.

Further information may be had on application to Dr. James Carslaw, Secretary, Post-Graduate Medical Association, 6, Woodside Crescent, Glasgow, C.3.

AUSTRALIAN AND NEW ZEALAND MEDICAL ASSOCIATION.

The Australian and New Zealand Medical Association gives information and advice to medical visitors from the Commonwealth and Dominions with regard especially to attendance at special clinics, post-graduate work, and facilities for preparing for examinations such as the M.R.C.P., F.R.C.S. (England and Edinburgh), and the D.P.H., and also as to house appointments and clinical assistantships in London and the provinces. Information will also be given as to lodgings, sports, and social opportunities. All medical graduates or undergraduates born in Australia or New Zealand and resident in or visiting England are eligible to become members. The fee is one payment of 5s. Further information can be obtained from the joint honorary secretaries, Mr. E. T. C. Milligan, F.R.C.S., and Mr. Bedford Russell, F.R.C.S., 86, Harley Street, London, W.1.

TROPICAL MEDICINE.

THERE are large and important schools of Tropical Medicine in London and Liverpool, and several universities and other examining bodies have instituted diplomas or degrees in the subject. The Colonial Office now expects all nominees for the Colonial Medical Service to pass through one or other of the two schools mentioned before their appointments are confirmed, and commercial firms engaged in tropical enterprise commonly demand from medical applicants for employment corresponding evidence of special knowledge. Information with regard to these schools and diplomas and degrees follows.

DIPLOMAS AND DEGREES.

LONDON UNIVERSITY.—Tropical medicine is one of the six branches in which the M.D. degree may be obtained. The regulations relating to the curriculum and examination correspond to those applying to the other branches.

LONDON CONJOINT BOARD.—This body grants a diploma in tropical medicine and hygiene to candidates after an examination held in the months of February and July. Candidates must present evidence of having attended, subsequently to obtaining a registrable qualification in medicine, surgery, and midwifery, (1) practical instruction in pathology, protozoology, helminthology, entomology, bacteriology, and hygiene in relation to tropical medicine, in an institution recognized for this purpose, during not less than five months; (2) the clinical practice of a hospital recognized for the study of tropical diseases during not less than five months. These conditions may be modified in the case of candidates who have had practical experience in tropical countries. The fee for admission to the examination is £9 9s. The Board also grants diplomas in public health, in psychological medicine, in ophthalmic medicine and surgery, and in laryngology and otology. Candidates must hold a medical qualification registrable in the United Kingdom, or be graduates in medicine of a recognized Indian, Colonial, or foreign university. Particulars and conditions of admission to these examinations, fees, etc., may be obtained from the Secretary of the Examining Board, Examination Hall, Queen Square, London, W.C.1.

UNIVERSITY OF LIVERPOOL.—A diploma in tropical medicine is given by this university to students who have attended the courses provided by the Liverpool School of Tropical Medicine and have passed the examination held twice yearly by the university examiners. The subjects of examination are (*a*) tropical pathology and parasitology; (*b*) entomology; (*c*) tropical medicine, including etiology, symptoms, diagnosis, and treatment of tropical diseases. Fee for the course, £21. A diploma in tropical hygiene (D.T.H.), open to the holders of the D.T.M., has recently been established. The subjects of examination are bacteriology, chemistry (including meteorology and climatology), entomology, protozoology and helminthology, tropical sanitation (including sanitary engineering), practical sanitation. Fee for the course, £10 10s. Further information can be obtained from the Dean of the Faculty of Medicine, University of Liverpool.

UNIVERSITY OF CAMBRIDGE.—This university grants a diploma in tropical medicine and hygiene to any person whose name has been on the *Medical Register* for not less than a year provided that he passes the examinations of the university in this subject. Candidates for Part I are examined in the same subjects as candidates for Part I for the Diploma in Public Health. Before admission to Part II, the subjects for which are medicine, surgery, and hygiene in their relation to tropical diseases, candidates must have passed Part I. An examination for Part I is held in April and for Part II in July. The fee for each part of the examination is 10 guineas. Application for further information should be made to Mr. J. E. Purvis, Public Health Chemical Laboratory, Medical School, Cambridge.

UNIVERSITY OF EDINBURGH.—Candidates for the Diploma in Tropical Medicine and Hygiene granted by the University of Edinburgh must be graduates in medicine and surgery of that university, or hold corresponding registrable degrees or qualifications of some other licensing body. The examinations are written, oral, and practical, and are held twice yearly (June and December). Candidates are required on the first occasion of presenting themselves for examination to appear for all the subjects. Those who fail to pass the entire examination within a period of twelve months after first appearance are required to reappear for all the subjects. Full particulars can be obtained from the Dean of the Faculty of Medicine, Edinburgh.

SCHOOLS.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (UNIVERSITY OF LONDON).

The London School of Hygiene and Tropical Medicine is a school of the University in so far as its active departments are concerned—namely, the Department of Bacteriology and Immunology, the Department of Epidemiology and Vital Statistics, and the Departments concerned with the teaching of Tropical Medicine and Hygiene. An advanced course of study for the diploma in bacteriology, intended for a limited number of post-graduate students and lasting for one academic year, will commence on October 4th, 1927, and courses of instruction (minimum period three months) in the application of statistical methods to the problems of Epidemiology and Public Health Administration will also be instituted on October 4th. The work which prior to August 1st, 1923, was carried on by the London School of Tropical Medicine continues for the present in the building occupied by the Hospital for Tropical Diseases at Endsleigh Gardens, W.C.1, where the specially equipped laboratories, museum, library, and clinical facilities afford excellent opportunities to those who may be desirous of studying diseases incidental to tropical climates before entering the services or going abroad. In the wards of the Hospital for Tropical Diseases are to be found cases such as may be met with in actual practice in the tropics. There are two courses in the year, each lasting twenty weeks, beginning October 3rd, 1927, and March 12th, 1928, respectively. The course is so arranged as to equip men for the D.T.M. and H. of the Conjoint Board. There are advanced courses in the several subjects, and a special course in parasitology for D.P.H. students and for the first part of the D.T.M. and H.Camb. Clinical instruction is also provided for the second part of the D.T.M. and H.Camb. Tropical medicine is a sixth alternative subject for the M.D. of the University of London, and the school curriculum is adapted to afford facilities for candidates desirous of taking the M.D. in this subject. The course in Tropical Hygiene may be taken separately, if desired. Research studentships and scholarships are available. Further information

may be obtained from the Secretary, London School of Hygiene and Tropical Medicine, 23, Endsleigh Gardens, London, W.C.1.

THE UNIVERSITY OF EDINBURGH.

A course of instruction for the diploma is given during the autumn term (October to December), and includes tropical hygiene, bacteriology, entomology, and parasitology, and diseases of tropical climates (systematic and clinical). The University is included in the list of institutions whose courses of instruction in tropical medicine may be taken by officers of all Colonial Medical Services on first appointment or during study leave. Full particulars can be obtained from the Dean of the Faculty of Medicine.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

This school is affiliated with the University of Liverpool. The University now grants diplomas in tropical medicine (D.T.M.) and in tropical hygiene (D.T.H.).

Two full courses of instruction, each lasting about eleven weeks, are given every year for the D.T.M., commencing respectively October 1st (Autumn term) and January 7th (Lent term); and two courses for the D.T.H., beginning on January 7th and April 22nd (Summer term). The D.T.H. can only be taken by those who have obtained the D.T.M. Students who do not desire to take the diploma examinations held by the University at the end of each term are given a certificate if attendance has been satisfactory.

Fees.—(1) For the D.T.M. course, 20 guineas; for the D.T.H. course, 10 guineas. (2) For the diploma examinations, 5 guineas. An extra charge of one guinea is made for the use of a microscope if required.

The new laboratories of the school adjoin the University and the tropical ward of the Royal Infirmary. The dimensions of the building are 162 feet in maximum length by 84 feet in width. In addition to the basement, in which are accommodated the photographic department and large storage rooms, there are four floors. The ground floor has: (1) lecture theatre, with accommodation for about seventy students; (2) library; (3) a spacious museum with preparation room adjoining. The first floor has twelve rooms, in which are housed the Departments of Tropical Medicine and Entomology. The second floor has the main class laboratory, 69 feet by 58 feet, excellently lighted; and three other rooms, devoted to the Department of Parasitology. The third floor has a large research laboratory and two research rooms. On the roof is an insectorium, a mosquito-proof house, and other accommodation.

Since its foundation the school has dispatched to the tropics thirty-two scientific expeditions, many of the workers having been taken from among its students. The work done by the staff has been published in twenty-one special memoirs—in the *Annals of Tropical Medicine and Parasitology*, issued by the school, and in numerous articles in the scientific press.

The school has also two laboratories in the tropics: the Manáos Research Laboratory in Brazil; and the Sir Alfred Lewis Jones Tropical Laboratory in Sierra Leone, which was opened on January 10th, 1922, and is staffed by the school. Further information may be obtained from the Honorary Dean, School of Tropical Medicine, Pembroke Place, Liverpool.

PSYCHOLOGICAL MEDICINE.

IT cannot be impressed too strongly upon the medical student that a knowledge of mental disorder is just as essential as a knowledge of the other forms of disease which he will be called upon to treat in the routine of general practice. It must be understood that by the term "mental disorder" is not only meant those severe forms which are to be found in asylums, but the term also includes mental defectives of all grades, nervous, difficult, and backward children; the mild and often unrecognized psychoses; and also the various types of psychoneurosis. Such disorders provide the general practitioner with a large proportion of his most difficult cases, and he will find a good knowledge of mental disorder invaluable in his work. Apart from general practice, the student who proposes to take up a career in the prison service or, still more importantly, the school medical service, will find a knowledge of psychological medicine an almost essential part of his equipment.

Instruction.

Though at the present time the instruction given to the student is far from adequate to supply the knowledge of mental disorder requisite for the needs of the general practitioner, the facilities for the study of psychological medicine in the general hospitals are now much greater than in former years. Thus many of the teaching hospitals have out-patient departments for the treatment of mental cases, and in some of these hospitals special lectures are given on psychopathology. These facilities need not be utilized by the student, however, and the compulsory part of the curriculum is confined to formal lectures and a few attendances at some mental hospital. Here the student is apt to see mainly the terminal states of mental disease, and he is also apt to gain the impression that mental disorder is necessarily related to segregation and custody. We would therefore impress upon him the importance of attending the out-patient department for mental disorders, where he will be able to observe the mild and early cases such as he will hereafter meet with in general practice.

A scheme is now in actual operation at the Middlesex Hospital in which a small number of mental cases are treated in the hospital as in-patients. This is an important move from the teaching point of view, because the student will gain true insight into the relation between mental disorder and medicine as a whole, and he will realize that it is a form of illness to be studied with other diseases and to be treated along similar lines.

In London post-graduate courses of instruction of a comprehensive kind are given at the Maudsley Hospital and at Bethlem Hospital; and at the National Hospital, Queen Square, courses are arranged to meet the requirements for the diploma in psychological medicine in regard to nervous diseases. Courses in mental deficiency are arranged by the University of London. There are also post-graduate courses at the Universities of Glasgow, Cambridge, Edinburgh, Birmingham, Leeds, Manchester, Durham, and elsewhere.

Diplomas.

Those who are taking up psychiatry as a career will find it desirable to obtain a diploma in psychological medicine. Such a diploma is not at present compulsory for a permanent position on the staff of all mental hospitals, but it will probably become so in course of time, just as it is now essential to obtain the D.P.H. if a career in public health is contemplated. Psychiatry is one of the branches of medicine which candidates for the M.D. degree of the Universities of London and Edinburgh can take up, and, in addition, diplomas in psychological medicine, to which reference has been made, can be obtained from the Universities of Cambridge, London, Edinburgh, Durham, Leeds, Manchester, Dublin, and the National University of Ireland, and from the Conjoint Board in England. The Medico-Psychological Association of Great Britain and Ireland also grants certificates of proficiency after examination, and encourages the study of psychiatry by the offer of prizes for original and research work.

The requirements for a diploma differ to some extent in the various universities and colleges, but the following model scheme suggested by the Medico-Psychological Association, and already adopted by the Royal College of Physicians of Ireland, will give an indication of the scope of the examination for a diploma.

Model Scheme for a Diploma in Psychological Medicine.

1. The candidate must be already a registered medical practitioner.

2. The candidate may present himself for examination on the subjects detailed under Part I of the curriculum (see para. 4) immediately he has concluded the prescribed courses of instruction, or can produce such other evidence of diligent study of the subjects to be examined upon as may be demanded. Part I must be passed save by special permission at least three months prior to entering for examination on Part II of the curriculum.

3. The candidate may not present himself for examination on the subjects detailed under Part II of the curriculum (see 4) until he has been a registered medical practitioner for not less than two years. He must, subsequently to qualification, have been in the practice of an approved mental hospital for not less

than two years, or have attended for six months at a hospital, mental or general, for clinical instruction in psychological medicine, and subsequently held a resident appointment at an approved mental institution or mental wards of a general hospital for not less than six months. In both cases he must produce a certificate from a recognized source that he can apply his theoretical knowledge, and has practical acquaintance with, and is well and adequately versed in, the current clinical methods of examination and treatment of nervous and mental disorders. In the case of mental deficiency the certificate should include a practical knowledge of the various intelligence tests and other methods of ascertaining the degree of mental defect. He must also produce evidence of having attended, subsequently to qualification, courses of lectures, demonstrations or other evidence of diligent study of the subjects upon which he presents himself for Part II of the examination, as may be demanded.

4. Curriculum: Part I—(*a*) Anatomy, histology and physiology of the nervous system, including the autonomic system, anatomy and physiology of the endocrine glands, chemistry and cytology of the cerebro-spinal fluid. (*b*) Psychology, systematic and experimental. Part II—(*a*) Morbid anatomy, histology and pathology of the systems mentioned under Part I, (*a*) *post-mortem* and laboratory technique; (*b*) neurology and clinical neurology; (*c*) psychiatry (including the psychoneuroses), clinical psychiatry and the medico-legal relationships of mental disorders and mental deficiency. In addition, the candidate for Part II will need to show special knowledge of any one subject, to be selected by him from the subjects comprising Part I or Part II, or may choose to be examined in any one of the following subjects: (*d*) Mental deficiency and the mental disorders of childhood and adolescence, and the duties of school medical officers in relation thereto. (*e*) Bacteriology as applied to mental and nervous disease. (*f*) Psychopathology and psychotherapy. (*g*) The principles of diet, vitamins, and basal metabolism, and their application. (*h*) Eugenics and vital statistics. (*i*) Criminology and the jurisprudence of criminal responsibility.

5. The diploma, by request, may be endorsed that special knowledge has been shown in the subject selected.

6. It is suggested that any compulsory attendance at lectures or demonstrations and clinical courses should be limited to the subjects detailed for Part II, and that the course for Part I or Part II should not exceed eight weeks.

Mental Hospital Appointments.

Those who take up psychiatry as a career work as medical officers of public or private mental hospitals or similar institutions. Except in the larger institutions, such as those under the control of the London County Council, where a number of the medical officers are allowed to live out if married, the medical staff are resident officers, having board, lodging, etc., either in the hospital itself or a residence in the grounds. Junior assistant medical officers receive about £300 to £400 per annum, and senior assistant medical officers about £500 to £700, in both cases with board, lodging, laundry, etc., in addition; if married, the board, etc., is commuted for cash. As the mental hospitals are under local control the salaries vary much in different asylums. Medical superintendents, whose pay commonly ranges between £800 and £1,500 per annum, are provided with a house in the grounds of the hospital and draw various allowances.

Since the passing of the Asylum Officers' Superannuation Act of 1909, all officers and others of the established staff of a public (county or borough asylum) mental hospital may retire at the age of 55 on a pension varying from one-half to two-thirds of the value of their pay and emoluments, or one-fiftieth for every year served, paying as contribution 3 per cent. of the value of their appointments annually. This very favourable prospect may not appeal to junior practitioners joining the services, but will eventually prove to be a valuable asset.

Prospects in the Public Service.

Appointments to the public mental hospitals are made by the visiting committees, and in most cases only the junior posts are open to those who have not had previous experience in psychiatry. Since the public mental hospital service is a local and, except indirectly, not an imperial one, the promotion tends to be slow and uncertain, and the higher positions are not always advertised and thus thrown open to competition. For this and other reasons mental hospital work has undoubtedly not been in favour with newly qualified men in years past, but the general conditions of service have tended to show a progressive improvement and will in all probability continue to do so in the future.

Both the British Medical Association and the Medico-Psychological Association are working separately and together to improve present conditions of service, and have, for example, already removed the "celibacy" objection to the service. The salaries have also been considerably increased, especially in the junior ranks, and contrast favourably with those which were paid before the war. During the last few years considerable progress has been made in the conditions under which the insane are treated. The asylums are developing an atmosphere approximating more closely to that of the general hospitals. As a result of these developments the mental hospital service is becoming more attractive, and now affords greater opportunities for the medical graduate who proposes to specialize in psychiatry.

While routine, administrative, and clerical work bulk largely in mental hospital duties, as they do in other public medical services, there is ample material, time, and scope for purely medical work and research—difficult as the subject may be—in psychiatry as one of the branches of medicine open to young graduates. Most mental hospitals are now equipped with efficient clinical laboratories; moreover, those who wish to undertake research are afforded every opportunity of doing so in the pathological department of the Maudsley Hospital and also in various other centres in England and Scotland. A change in the lunacy law, in which power was given to local authorities to make provision for the treatment of early and acute cases of mental disorder without certification, would do much to make psychiatric work more attractive to medical men. If this alteration in the law were made, hospitals, either in the precincts or the grounds of the county or borough mental hospitals, or in adjacent towns, would be erected in the course of time, or wards in general hospitals might be utilized for the same purpose. Such clinics would render appointments in mental hospitals more attractive because the work would be entirely free from the custodial aspects of mental disorder, and attention could be given by the physician to purely medical problems without irksome legal restrictions.

Maudsley Hospital, Denmark Hill.

A number of courses of instruction for the Diploma in Psychological Medicine have been given at the Maudsley Hospital, the details of the last course being as follows: The course consisted of two parts. In the first part lectures on the anatomy and physiology of the nervous system were given by Dr. Golla, with practical instruction in biochemistry by Captain Mann and in anatomy by Mr. C. Geary. A course on special histology of the nervous system was given by the late Dr. Da Fano, and a course on theoretical and practical psychology by Dr. Devine. For the second part of the course lectures on morbid psychology and psychiatry were given by Dr. Mapother, on the neuroses by Dr. Bernard Hart, on therapeutics by Dr. Petrie, on general pathology by Dr. Golla and Mr. C. Geary, and on pathological chemistry by Captain Mann. Dr. Bond lectured on the legal relationships of insanity, Dr. Shrubsall on mental deficiency, and Dr. East on criminal insanity. Dr. Golla and Dr. Walshe gave instruction on clinical neurology, and Mr. Foster Moore on eye changes as applied to psychiatry. The fee for the whole course (Part I and Part II) was 15 guineas, or for either part separately 10 guineas; for one single series of lectures in Part I the fee was 4 guineas, and in Part II 2 guineas. Inquiries as to lectures, etc., should be addressed to the Director of the Central Pathological Laboratory, Maudsley Hospital, Denmark Hill, S.E.5.

Bethlem Royal Hospital.

A course will be held at Bethlem Royal Hospital, commencing on September 12th, of lectures and practical instruction for the Diploma in Psychological Medicine. It is proposed in future to give two courses each year—an autumn session of intensive character, commencing in September, and completed in early December, and a spring session, commencing in the middle of January and completed in the middle of April. Each course consists of two parts: Part A includes lectures and demonstrations on the anatomy, histology, and physiology of the nervous system, with lectures on psychology and demonstrations in experimental psychology; Part B comprises lectures and clinical demonstrations in psychology, including lectures

and demonstrations in the morbid anatomy of the nervous system, a series of lectures, with clinical demonstrations, on different branches of psychological medicine, and lectures, with clinical demonstrations, on mental deficiency. Entrants for the course who pay a composition fee of 15 guineas may, if due notice is given, attend either Part A or Part B of one course and postpone the other part until the next session. An entrant who wishes to attend one part only pays a fee of 10 guineas. An entrant who takes the complete course can attend the general clinical practice of the hospital on payment of 5 guineas for six months, or 10 guineas for one year, but an entrant who does not take either part of the course and desires to attend the clinical practice of the hospital must pay a fee of 5 guineas for each three months of attendance. To enable post-graduates to obtain special experience in this branch of medicine clinical assistants are appointed from time to time. Further particulars may be obtained from the physician-superintendent, Bethlem Royal Hospital, S.E.1.

National Hospital, Queen Square.

A post-graduate course, which fulfilled the requirements of the regulations for the Diploma in Psychological Medicine in regard to instruction in nervous diseases, was held at the National Hospital, Queen Square, Bloomsbury, W.C.1, in May and June, and other courses will be duly announced. Lectures on the pathology of the nervous system and various clinical lectures were delivered and demonstrations were given, and out-patient clinics were held at the hospital on the afternoons of Mondays, Tuesdays, Thursdays, and Fridays. An inclusive fee of 9 guineas was charged for the whole course, but any part of the course could be taken separately at a special fee. A special arrangement was made for those unable to attend the whole course, and for details applications should be made to the dean of the medical school. Similar courses are held three times a year—namely, February, May, and October. Special arrangements are made throughout the year for work in the laboratory. Fees are payable to the secretary of the hospital on entering for the course.

The Tavistock Clinic for Functional Nerve Cases.

Courses in modern psychotherapeutic methods for the treatment of "nervous breakdowns" can be obtained at the Tavistock Clinic, 51, Tavistock Square, W.C.1; and those who want to specialize in this treatment can obtain clinical assistantships. The methods of the clinic comprise a full and sympathetic investigation of the patient's history, sometimes dream analysis, suggestion and mental exercises where necessary, and re-education of the patient to fit him to deal with his difficulties. The director of the clinic is Dr. H. Crichton-Miller, the deputy director Dr. J. R. Rees, and there is a children's department under the directorship of Dr. W. A. Potts.

THE PUBLIC HEALTH MEDICAL SERVICES.

THE central authority to secure the adoption, effective carrying out, and co-ordination of measures conducive to the health of the people, and to promote research work and the proper training of persons for health services, is the Ministry of Health.

For the purpose of local public health administration the whole of England and Wales is divided into counties, county boroughs, boroughs, and urban and rural sanitary districts. The administrative County of London, exclusive of the City of London, is divided into twenty-eight metropolitan boroughs.

The public health medical services for Great Britain embrace between three and four thousand medical men and women who give whole-time services, and in addition a large number who give part-time services. The medical officers appointed for these services may be either medical officers of the Ministry of Health for England or of the corresponding Boards of Health for Scotland and Wales; or—and these form the large majority—they may be medical officers appointed by the many local public health authorities. These latter appointments include: medical officers of health, tuberculosis medical officers, maternity and child welfare medical officers, venereal diseases medical officers, and school medical officers—for the education authorities must now be regarded as health authorities in respect to the health interests of the school child. By the larger public health authorities assistant medical officers are also appointed, and these posts often serve as stepping-stones to the higher offices as vacancies, which are required to be advertised, occur.

The Medical Services of the Central Authority.

The Medical Department of the Ministry of Health for England has been organized under the control of a chief medical officer. It contains six sections, with a senior medical officer at the head of each, and about fifty medical officers. The sections deal with: general health and epidemiology, maternity and child welfare, tuberculosis and venereal diseases, the supervision of food supplies, and sanitary administration in relation to infectious diseases. There is, in addition, a section concerned with insurance practitioners. Appointments to these posts are not as a rule open to public competition; they are made by the Minister of Health. They are civil service appointments, and come under the civil service superannuation scheme. Medical officers are also employed by the corresponding Boards of Health for Scotland and Wales.

Medical Officers of Health.

The duties of the medical officer of health are to inform himself upon all influences affecting, or threatening to affect, injuriously the public health within his district; to advise his sanitary authority upon all matters relating to health; and to perform all the duties imposed upon him by statutes, by-laws, and regulations. He must prepare and submit to his local authority special and annual reports; give immediate information to the Ministry of Health of any serious outbreak of disease; and, subject to the instruction of his sanitary authority, he shall direct or superintend the work of sanitary inspection.

By the Sanitary Officers Order, 1926, no person is qualified to be hereafter appointed or reappointed as a medical officer of health of any district or combination of districts unless, in addition to the qualifications prescribed by any statute, he is also either registered in the *Medical Register* as the holder of a Diploma in Public Health, Sanitary Science, or State Medicine, or has had not less than three years' previous experience of the duties of a medical officer of health.

The Public Health (Officers) Act, 1921, which was promoted by the British Medical Association, provides that a whole-time medical officer of health of a county borough or urban and rural district in England and Wales, a part of whose salary is contributed by the Exchequer, shall not be appointed for a limited period, and shall not be removed from his office except by or with the consent of the Minister of Health. A similar security of tenure also applies to the medical officers of health of county councils and of London boroughs.

Under the Sanitary Officers Order, 1926, a medical officer of health who does not devote his whole time to the duties of his office, but a portion of whose salary is obtained from Exchequer grant, may be appointed without limit of time; in which case he cannot be removed from office without the consent of the Minister. If he is appointed for a specified term, say one year, he continues to hold office from year to year unless the Minister consents to his removal. Where the electing body pays the whole of the salary of a medical officer of health he may be dismissed from office without reference to the Minister of Health.

A considerable number of authorities have now adopted the Local Government and Other Officers Superannuation Act, 1922. Under this Act if an officer is incapacitated by ill health after ten years of service, or if he has reached 65 years of age, he is entitled to superannuation on the following scale: after ten years' service, 10/60 of the average salary which he received during the last five years of employment; after eleven years, 11/60, and so on up

to a maximum of 40/60 after forty years or more of service. The Act, however, remains permissive, and it fails to make due allowance, in computing service for purposes of superannuation, for the more advanced age, as compared with other officers, at which the medical officer of health can enter the public service. In these two respects the position reached falls short of that for which the British Medical Association has been working for many years.

In Scotland the position is different in some respects. The central authority is the Board of Health, with a staff of medical officers for insurance work. Under the Public Health (Scotland) Act, 1897, no one can be appointed as medical officer of health for any area unless he possesses the Diploma in Public Health. No medical officer can be removed from office except with the sanction of the Board of Health. A "proper" salary must be paid, and the local authority may not bring about the resignation of the officer by indirect means, such as reducing the salary or attaching conditions to the appointment. The Act says nothing about superannuation or the age of retirement.

School Medical Officers.

School medical officers are appointed by local education authorities. Primarily their duty is to detect among the children attending the public elementary schools any physical or mental defect which may retard education, and to inform their parents of its existence. Most approved schemes of medical inspection include arrangements which facilitate the task of parents in obtaining for their children the necessary treatment, check the results of this treatment, and keep each defective child under skilled observation both at home and at school until it has passed altogether out of the education authorities' hands. Indeed, it is now the practice for the education authorities themselves to provide for certain ameliorative work, notably the prescription of glasses where necessary, dental treatment, the removal of adenoids and tonsils, and treatment in connexion with certain diseases of the skin. The general object of all schemes alike is to make the inspection imposed by law of benefit, not merely to the individual child, but to the community at large, by preventing the development of conditions which lead to the existence of a large proportion of inefficient citizens among the adult population. The work is so related to that of medical officers of health that, as a rule, the senior school medical officer fills both appointments, his work, when necessary, being supplemented by that of whole- or part-time assistants. A Diploma in Public Health is almost always required of those entering the school medical service.

In Scotland, while the statutory authority for the work of the school medical service is different, the effect is broadly the same.

Tuberculosis Medical Officers.

A tuberculosis medical officer is a whole-time officer with special training and experience in tuberculosis work, and of a suitable age and attainments to command general confidence. In England and Wales such officers are appointed by county councils and county borough councils, and their duties are to carry out the work of diagnosis of tuberculosis, to advise as to treatment, and to take charge of the work of tuberculosis dispensaries and sanatoriums where these are in operation. The work under tuberculosis schemes is co-ordinated with the general public health work of local authorities, and so the medical officer of health is often appointed as the chief tuberculosis officer when a special tuberculosis officer is on the staff of the local authority. The arrangements in Scotland are very similar.

Maternity and Child Welfare Medical Officers.

Any public health local authority, however small, may make arrangements for maternity and child welfare work within its area, although very generally the smaller local authorities are embraced in county council schemes. For the schemes of the smaller local authorities the services of a part-time medical officer are obtained when the medical officer of health does not himself undertake the duties; but for the larger schemes special whole-time appointments are made. The maternity and child welfare medical officer is responsible for the work at the centres provided and for directing the home visitations; and the whole of this work is closely co-ordinated with the other branches of public health work directed by the medical officer of health.

Much of this work was commenced in different parts of the country by voluntary organizations; some of it still remains in their hands, and is only loosely linked up with the public health local authority; but the tendency is for the whole of it to be undertaken by the local authorities. A large number of women medical officers have been appointed to these posts during recent years.

Venereal Diseases.

Schemes for the diagnosis and treatment of venereal diseases are provided and administered by county councils and county borough councils. In some cases the officer is on the whole-time public health staff, and in others he is a part-time official. Special knowledge and practical experience in the treatment of venereal diseases are essential. The officer appointed for either whole-time or part-time service works at one or more clinics, and also gives instructions and assistance in the treatment of venereal diseases to general practitioners, who are allowed to attend the clinics.

Remuneration for Services.

If we are to have skilled and highly trained medical officials of public authorities it is of course essential that they should receive salaries commensurate with their attainments and bearing a reasonable relation to the amount of time and money expended in fitting them for their important and responsible duties. At present, no standard scale of remuneration for whole-time services has been adopted by public health authorities, although the British Medical Association and the Society of Medical Officers of Health—and more recently the Ministry of Health—have endeavoured to bring this about.

The present-day rate of remuneration for the whole-time services of a medical officer of health may be said to vary from £700 to £2,000 per annum, according to the dimensions of the population served and the officer's experience; while the maximum salaries of the principal medical officers of departments of public health work are somewhat lower. The whole-time medical officer working under a senior medical officer in most cases receives a commencing salary of £600 per annum, with bonus in some cases.

There are good prospects of the general adoption in the near future of a recognized scale of remuneration, which will provide a minimum commencing salary of £800 for a whole-time medical officer of health; of £750 for chief medical officers of departments, and of £600 for all medical officers working under chief medical officers—when these are not resident in an institution provided by the local public health authority and when they give whole-time services.

The Regulations for the Diploma in Public Health.

The Examination.

By the Regulations or Rules of the General Medical Council, which came into force on January 1st, 1924, the examination for the D.P.H. is divided into two parts, and no candidate is allowed to sit for the final part of the examination until two years have elapsed since a registrable qualification was obtained. The object of this two years' interval is "to provide opportunity for candidates for the Diploma or Degree in Sanitary Science, Public Health, or State Medicine, to pass from the state of pupilage to that of responsible practitioners, to give mature consideration to the obligations and duties involved in the work of the Public Health Service, and to acquire direct experience of medical work in a responsible capacity either in practice or in hospital or laboratory appointments."

The examination is both written and oral, and must include practical examination in bacteriology and chemistry (Part I) and in infectious diseases, food inspection, inspection of premises, dwellings, factories, workshops, schools, etc. (Part II).

Any candidate from the Dominions who possesses qualifications registrable in this country is eligible as a candidate for the examination, given that he has received such a course of training as that defined by the Regulations, at an institution which is approved by the General Medical Council.

The Curriculum for the Diploma in Public Health.

The curriculum must extend over a period of twelve months; and a candidate is admitted to either part of the examination after he has completed the prescribed courses of instruction in the subjects thereof. At least five months must be given to practical laboratory instruction in an institution approved by the licensing body, in the subjects:

(1) Bacteriology and parasitology, including entomology, especially in relation to diseases of man and to those diseases transmissible to man from the lower animals (180 hours of such instruction is required).
(2) Chemistry and physics in relation to public health (90 hours of such instruction is required).
(3) Meteorology and climatology (10 hours of such instruction is required).

Therefore at least 280 hours of practical instruction, extending over a period of at least five months, is demanded before a candidate is eligible for Part I of the examination.

For a candidate to become eligible for Part II of the examination he must first receive instruction in:

(1) Principles of public health and sanitation (for approximately 30 hours).
(2) Epidemiology and vital statistics (approximately 20 hours).
(3) Sanitary law and administration, including public medical services (approximately 20 hours).
(4) Sanitary construction and planning (approximately 10 hours).
(5) Every candidate must also have made thirty attendances, of not less than two hours in each week of a three-months period, at the clinical practice of a recognized hospital for infectious diseases; and he must have received instruction in methods of administration.
(6) Every candidate must produce evidence that he has, during a period of not less than six months, been engaged in acquiring a practical knowledge of the duties, routine and special, of public health administration under the supervision of a medical officer of health, who shall certify that the candidate has received, from this officer or other competent medical officer, during not less than three hours on each of sixty working days, practical instruction in these duties, and those relating to:
(*a*) Maternity and child welfare service;
(*b*) Health service for children of school age;
(*c*) Venereal diseases service;
(*d*) Tuberculosis service;
(*e*) Industrial hygiene;
(*f*) Inspection and control of food, including meat and milk.

Certificates of having received the prescribed instruction in public health administration must be given by a medical officer of health who devotes his whole time to public health work; or by the medical officer of health of a sanitary area having a population of not less than 50,000; or in Ireland by the medical superintendent officer of health of a county or county borough having a population of not less than 50,000.

TRAINING CENTRES FOR THE DIPLOMA IN PUBLIC HEALTH.

Most of the universities of Great Britain and Ireland are training centres for the Diploma in Public Health. The University of London provides an M.D. in State Medicine for its own M.B., B.S. graduates.

In London at the present time there are fewer training centres for the D.P.H. than formerly. Candidates who desire to train in London can do so at University College and the Royal Institute of Public Health; and also at the Medical Schools of St. George's and Middlesex Hospitals when a sufficient number of candidates apply for the training. It is expected that in less than two years the post-graduate teaching and training in Public Health, in London, will be provided at one centre only—the London School of Hygiene and Tropical Medicine, which is in process of erection.

The University of Manchester has a well equipped department of bacteriology and preventive medicine, where candidates preparing for the examinations of the various university and examining boards for the Diploma in Public Health can obtain instruction. It also prepares candidates for the Diploma in Bacteriology and in Veterinary State Medicine, granted by the University, and for its Certificates in Factory Hygiene and School Hygiene. Full particulars can be obtained from the Dean of the Medical School, the University, Manchester.

The University of Edinburgh, which grants a Diploma in Public Health, makes provision for instruction in all the subjects. Further particulars can be obtained from the Dean of the Faculty of Medicine, Edinburgh.

THE NAVY, ARMY, AIR FORCE, AND INDIAN MEDICAL SERVICES.

THE Medical Departments of the Royal Navy, of the Army, and the Indian Government normally employed between them before the war some 3,000 medical men, and vacancies in the ranks of these services were filled by offering commissions for competition once or more each year. In the abnormal circumstances arising out of the war and the period following it the usual regulations for recruiting the permanent medical staff of these services were, for the most part, in abeyance, and the newly formed Royal Air Force Medical Service also has depended largely upon short-service commissions for the maintenance of its medical personnel.

Meanwhile, recruitment for the Royal Naval Medical Service and for the Royal Army Medical Corps was seriously prejudiced by disadvantageous terms and conditions of service generally, and in particular by hardships inflicted under new regulations upon certain groups of senior officers. Continued representations were made by the British Medical Association, but without avail, and it is only lately that its efforts on behalf of these services have begun to bear fruit in the manner indicated below. The often repeated refusal to remedy grievances imposed upon the Association the distasteful duty of issuing warnings to newly qualified practitioners; but now that the Government has changed its attitude the Association is using every endeavour to assist the Admiralty and the War Office in obtaining the candidates they need. In securing the improved terms which it has pressed upon the authorities the Association gained a very notable success.

Improved Terms and Conditions.

As a result of the recommendations of the Interdepartmental Committee on the Medical Branches of the Fighting Services, before whom the British Medical Association gave evidence early last year, substantial increases in the rates and pay and retiring gratuities, and improved conditions of retirement for officers of the Royal Army Medical Corps, were embodied in a Royal Warrant issued by the War Office on June 29th, 1926.[1] Simultaneously the Air Ministry announced improvements in the conditions of service and emoluments of medical officers of the Royal Air Force. The Admiralty also issued an Admiralty Fleet Order prescribing improved terms and conditions of service for medical officers R.N., and the India Office followed with revised terms of special recruitment for officers of the Indian Medical Service.

The changes, generally, took effect from July 1st, 1926, or (in the case of naval officers) as soon afterwards as the necessary arrangements could be made.

The British Medical Association, after examination of the revised terms, is satisfied with the new rates of pay and conditions of service for the R.N.M.S., the R.A.M.C., and the R.A.F.M.S.;[2] and in fulfilment of its desire to assist in recruiting these services we publish below the full particulars of each which have been supplied at our request by the Admiralty, the War Office, and the Air Ministry.

In regard to R.A.M.C. officers, whose particular difficulties have engaged the special attention of the Association during recent years, the increases in the rates of pay and retiring gratuities are substantial, as will be seen

[1] BRITISH MEDICAL JOURNAL, July 3rd, 1926, p. 41.
[2] Report of Annual Representative Meeting, Nottingham, 1926, BRITISH MEDICAL JOURNAL SUPPLEMENT, July 31st, 1926, p. 88

if the new rates are compared with the old rates promulgated by Royal Warrant after the war. But the new rates, like the old, are subject to a 6 per cent. reduction owing to the decrease in the cost of living. The increases in the pay of R.A.M.C. officers do not begin until after six years' commissioned service, but from that time onwards, especially in the rank of major, very much has been done to make the service more attractive. One of the chief grievances was the fact that a major, after three years in that rank, or fifteen years' commissioned service, got no increase of pay until he was promoted lieutenant-colonel, a promotion which might possibly not take place until he had as much as twenty-four years of service. The new Warrant gives him a steady increase of pay, not only after fifteen years' service, but also after eighteen or twenty years' service. The ranks senior to that of major also participate in very substantial concessions. The retiring gratuities of a major after three and six years' service are now perhaps so great as to induce officers to retire before they become eligible for a pension, but in that case it is hoped that they will only make room for a large influx of junior officers to carry on the duties that are now being performed by those more senior in the service. The British Medical Association held out strongly for the removal of a serious grievance in regard to the retiring pension of an officer after twenty years' service, and it pointed out that it was possible in the future for a major to have to retire on a less pension than £1 a day, which had been granted to him from time immemorial. The new Warrant relieves him of anxiety in this respect, and explicitly states that his pension cannot be reduced below that amount. Another important point should be noted—namely, the concession by which a newly qualified medical man can hold a hospital appointment for one year before entering the service, counting it as a year of service towards promotion and retirement. Previously this concession was only given after the officer had entered the service. This was one of the points that were strongly brought forward in the evidence submitted by the Association to the interdepartmental committee, and should give special satisfaction to members of the medical profession. It will be seen that both the Royal Navy and Royal Air Force Medical Services have also benefited considerably by the recommendations of the committee. A further gain has been obtained for the Royal Army Medical Corps by the grant of marriage allowance for officers serving in India; an allowance that had been withheld from the R.A.M.C. officer while conceded to officers of other branches of the service. There is still, however, considerable difficulty in getting a sufficient number of young medical officers; but there is no reason why young men recently qualified should not enter the services, the prospects in which both financially and professionally are good.

ROYAL NAVAL MEDICAL SERVICE.

AN Admiralty Fleet Order, issued in July, 1926, announced changes in the terms and conditions of service for naval medical officers. The improvements include an increase in the establishment of Surgeon Captains from 16 to 20, and also in the number and remuneration of specialist appointments open to medical officers. These appointments comprise specialist posts in medicine, surgery, radiology, and hygiene, and the allowance payable to holders of them has been raised from 2s. 6d. to 5s. a day. As soon as possible courses of instruction in clinical medicine, surgery, and allied subjects are to be provided once in every four years for all officers below the rank of Surgeon Captain; courses for those selected to hold specialist appointments will be arranged in connexion with civil hospitals in London or other teaching centres. Medical officers entering the Navy on or after July 1st, 1926, will be eligible, at the discretion of the Admiralty, to have their seniority antedated up to a limit of one year if they have held previously a resident appointment in a civil hospital for not less than this period. Such an appointment must be one recognized by the Admiralty for this purpose, and must not have terminated more than six months before entry into the service.

Examinations for direct entry into the Medical Service are at present in abeyance. Entries are made by means of the short-service scheme, and the regulations provide for the transfer to the permanent service of desirable short-service officers. A short-service surgeon lieutenant, after six months' service, may be considered for transfer to the permanent service, and would be permitted to count his seniority from the date of entry for short service for purposes of promotion, increment of full pay, and for retired pay.

General Conditions.

A candidate must be registered, must be under 30 years of age and must be recommended by the dean of his school. Unmarried candidates will be preferred. A candidate will be interviewed by the Medical Director-General, R.N., and will undergo a physical examination. If considered eligible by the Medical Director-General his name will be submitted to the Board of Admiralty and he may be appointed "surgeon lieutenant for short service." A candidate must engage for three years, with the option of continuing for a further period of twelve months if his services are still required. The rate of pay is £1 4s. 10d. a day or £453 4s. 2d. a year, with the same allowances as are payable to permanent officers of their rank. Lodging money at the rate of £80 a year is usually allowed when employed on shore, without quarters in the United Kingdom, and £56 10s. a year in lieu of rations when not victualled in kind. On joining an allowance of £50 for uniform will be made. When the previous rates of pay were fixed it was decided that 20 per cent. should be considered as due to the then high cost of living. The rates set out above represent a reduction of approximately 6 per cent. owing to the decrease in the cost of living. The whole 20 per cent. is to be regarded as variable and subject to change on July 1st, 1930, and triennially thereafter either upwards or downwards according as the cost of living rises or falls.

An officer engaged for three years is entitled to receive two months' notice of his services being no longer required. A gratuity of £8 6s. 8d. will be payable to officers for each completed month of service on completion of their period of service, or to any who are invalided for causes not within their own control before the completion of the prescribed period.

Surgeon lieutenants R.N. for short service intending to apply for transfer to the permanent list must have been under 28 years of age at the time of their entry into the Royal Naval Medical Service.

MEDICAL OFFICERS R.N.

Full Pay.

	Current Rate per annum. £ s. d.
Surgeon Lieutenant on entry	410 12 6
After 3 years	498 16 8
(Surgeon Lieutenants usually receive promotion after 6 years' service.)	
Surgeon Lieutenant Commander on promotion ...	599 4 2
After 3 years	635 14 2
(Surgeon Lieutenant Commanders usually receive promotion after 12 years' total service.)	
Surgeon Commander on promotion	772 11 8
After 3 years	839 10 0
After 6 years	909 9 2
After 9 years	975 7 6
Surgeon Captain on promotion (promotion is by selection)	1,116 5 10
After 3 years	1,201 9 2
After 6 years	1,286 12 6
Surgeon Rear-Admiral (promotion is by selection)	1,780 13 4
Medical Director-General (Surgeon Vice-Admiral)...	2,350 0 0

The current rates set out above are payable from July 1st, 1927, and represent a deduction of 6 per cent. from the standard rates; 20 per cent. of the standard rate is regarded as variable as the cost of living rises or falls. The next revision will be on July 1st, 1930.

Gratuities on Withdrawal.

The following gratuities are payable if an officer of the permanent list is permitted to retire voluntarily:

	£
After 4 years' full-pay service...	500
„ 8 „ „ „	1,000
„ 12 „ „ „	1,500
„ 16 „ „ „	2,250

Surgeon lieutenants for short service, transferred to the permanent list, will only be allowed to withdraw with a gratuity after four years' full-pay service from the date of such transfer.

Maximum Retired Pay.

(Approximate current rates.)

	£
Surgeon Vice-Admiral	1,123
Surgeon Rear-Admiral	960
Surgeon Captain	846
Surgeon Commander	564
Surgeon Lieutenant Commander and Surgeon Lieutenant	423

Full particulars and a form of declaration can be obtained from the Medical Director-General, Admiralty, Queen Anne's Chambers, Tothill Street, London, S.W.1.

ARMY MEDICAL SERVICE.

DURING the last two years, and in fact since the war, candidates have practically ceased to apply for commissions in the Royal Army Medical Corps. While the cause of this must to a great extent be attributed to the war, a still more potent cause latterly has been an accumulation of grievances of a character which led the British Medical Association to refrain from recommending the army as a career for newly qualified medical men. This attitude we are now able to abandon whole-heartedly owing to the issue of a Royal Warrant last year removing practically all the grievances from which the R.A.M.C. officers were suffering.

Entrance to the corps, either by competitive examination or by selection, as decided by the Army Council, will take place half-yearly, in January and July. The examinations in medicine and surgery are entirely of a clinical and practical character, partly written and partly oral. The regulations for admission, giving full details, can be obtained from the Under Secretary of State (A.M.D.1), War Office, Whitehall, London, S.W.1, and should be carefully studied. A personal interview with a representative of the Director-General, Army Medical Services, is readily obtainable. The rates of pay and allowances are good; the opportunities of post-graduate study are generous, and the work is varied, responsible, and interesting. The gratuities after certain periods of service enable an officer, should he so desire, to leave the service with a capital sum large enough to go a long way towards re-establishing himself in civil life, and, further, the knowledge of the world and the comradeship of his fellow officers that he has gained in the army will be of no small value to him.

New entrants are commissioned in the rank of lieutenant, and the first six months of service are spent on probation, during which time they undergo, in addition to their military training at the Royal Army Medical Corps depot at Aldershot, a probationary course at the Royal Army Medical College in London in hygiene, pathology, tropical medicine, military surgery, recruiting, the prevention and treatment of venereal disease, and the elements of army administration. At the end of this course, and after qualifying at the necessary examinations, their commissions are confirmed and they take their places in seniority according to the total marks obtained at all examinations up to that date. Officers' Training Corps service with possession of certificate "A" or "B" (medical) carry a definite value in marks in this total.

An entrant who is holding or about to hold at the time of the entrance examination a resident house appointment at an approved civil hospital may be seconded while holding such an appointment up to a maximum period of twelve months. A candidate who has held such an appointment within six months of entry may be granted an antedate up to twelve months in respect of the period the appointment was held. This secondment and antedate counts in all respects as commissioned service, except that pay will not be issued for that period.

After a total period of one year's service at home, the young officer goes abroad, probably to India, for his first tour of foreign service. Here he gains his first practical experience of tropical disease and tropical hygiene, and possibly his first experience of active service on the frontiers of India. His tour abroad lasts five years, with probably six months' leave home during that time. On returning home the R.A.M.C. officer has the opportunity to decide whether he will remain in the corps or accept the gratuity of £1,000 after seven years' service and try his fortune in civil life. If he elects to remain, he will, between his eighth and twelfth year of service, undergo a course of post-graduate study at the Royal Army Medical College and the London hospitals of five months' duration, followed by a course of study of a special subject selected by himself provided he has shown special aptitude in the post-graduate course or during his previous service. During this period of study he remains on full pay and the fees of the courses are paid by the State. When qualified in his special subject the officer becomes entitled to specialist pay at 5s. a day when holding a specialist appointment. After this post-graduate course the officer probably proceeds abroad again and promotion to major rapidly ensues, and from that time onward the officer receives regular successive increases of pay and is eligible for additional and charge pay as well. The directorates of hygiene and pathology and the appointment of two serving officers as consultants in medicine and surgery have been instituted, and have proved a marked success. All these appointments are of the rank of colonel or major-general, and were devised to permit specially selected officers to rise through all ranks to that of major-general on the strength of their professional or purely scientific work. This side of the work of Royal Army Medical Corps officers is carefully watched by these directors and consultants, and not only ensures the maintenance of a high standard but enables the good professional work of individuals to be brought to notice.

Under these conditions the possibilities for good workers are very great in the Royal Army Medical Corps. There is scope for original research in tropical disease, in preventive medicine, and in bacteriology, as well as in the large clinical field open to the specialist in medicine, surgery, or gynaecology, in venereal disease, and in ophthalmology. Child welfare is also undertaken systematically by officers of the Royal Army Medical Corps. At the same time, instruction in administration is continuous. The Royal Army Medical Corps is essentially organized for war, and one of the lessons of the great war was that trained administrators must exist to enable the fullest benefit to be obtained from professional talent. Many appointments carrying administrative responsibility are open to those officers who display capacity for this duty. All officers must be prepared to undertake command and to have a knowledge of army administration, especially in war. Equally important is the technical training of the non-commissioned officers and men of the corps in such "trades" as trained nurse, nursing orderly, masseur, radiographer, operating room assistant, laboratory assistant, hospital cook, dispenser, etc. This training is carried out by the officers and nursing sisters, and opens a large field for those who have ability in lecturing and teaching as well as the power of influencing men.

Promotion.

Promotion takes place automatically to captain after three and a half years' and to major after twelve years' service, provided the officer is qualified and recommended for promotion. Promotion to the higher ranks is by selection from those senior in the rank below, but special promotion by brevet or otherwise is open to officers of the Royal Army Medical Corps.

Pay and Allowances.

The rates of pay and allowances are given in the accompanying Table A (see p. 428); they compare favourably with those that obtained before the late war.

Additional Pay and Charge Pay for Officers of the R.A.M.C.

An officer not above the rank of lieutenant-colonel while acting as a specialist receives up to 5s. a day according to subject or group of subjects. An officer in charge of a hospital receives charge pay, the daily amounts being: in excess of 50 beds, 2s. 6d.; in excess of 150 beds, 5s.; in excess of 300 beds, 7s. 6d.; in excess of 500 beds, 10s. An officer in charge of a medical or surgical division of a general hospital with not less than 300 beds receives half these rates. Senior medical officer Royal Arsenal, not exceeding 10s. daily. Officer in command of the depot R.A.M.C., 5s. daily. The senior officer of the Army Medical Services with an army in the field, a rate to be fixed by the Army Council according to the magnitude of the charge. The officer, if under the substantive rank of colonel, holding the appointment of senior medical officer in a command abroad, or of assistant director of medical services, if the number of soldiers is 1,500 or upwards, 5s. daily. Adjutant R.A.M.C. depot, 5s. daily. Adjutant R.A.M.C.(T.A.), 2s. 6d. Further, an officer, graded as a specialist, and appointed to the charge of a medical or surgical division of a general hospital, may be allowed to retain his additional pay and to draw the rate of charge pay laid down for the officer in charge of a medical or surgical division of a general hospital, provided that the total of additional and charge pay so drawn does not exceed the rate of charge pay drawn by the officer in charge of the hospital. With this exception charge pay and additional pay as specialist will not be issuable concurrently.

Retirement and Retired Pay.

Retired pay will consist of two parts: (*a*) a service element based on the officer's total service; (*b*) a rank element for the rank from which the officer retires. An officer with less than twenty complete years' service will not be eligible for retired pay. The scale, subject to the reduction of 6 per cent. referred to below, is, for the service element, £15 a year for each completed year of service as a medical officer. For the rank element the scale is as follows:

Rank from which Retired.	After Completing 1 Year's Service in the Rank.	After Completing each Additional Year's Service.	Maximum Rank.
	£	£	£
Major	12	12	120
Lieutenant-Colonel	150	30	240
Colonel	290	50	390
Major-General	440	50	540
Lieutenant-General	590	50	690

The retired pay of an officer retiring with less than one complete year's service in the rank from which he retires will be assessed as though he had retired from the rank below.

TABLE A.—*Pay and Allowances.*

Rank.	Pay per Diem.*	Rations.†	Servant.	Married.			Unmarried.		Approximate Daily Total.		Approximate Yearly Total.	
				Lodging.	Fuel and Light (Average).	Furniture Allowance.	Lodging.	Fuel and Light (Average).	Married.	Unmarried.	Married.	Unmarried.
	£ s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	£ s. d.	£ s. d.	£	£
Lieutenant	1 0 8	1 6	2 0	3 6	1 5	2 0	2 3	1 2	1 11 1	1 7 7	567	503
Captain	1 5 4	1 6	2 0	4 6	3 0	2 0	3 0	1 8	1 18 4	1 13 6	700	611
Captain after 8 years' commissioned service	1 8 2	1 6	2 0	4 6	3 0	2 0	3 0	1 8	2 1 2	1 16 4	751	663
Captain after 10 years' commissioned service	1 10 6	1 6	2 0	4 6	3 0	2 0	3 0	1 8	2 3 6	1 18 8	794	706
Major	1 15 4	1 6	2 0	4 6	3 0	2 0	4 0	2 3	2 8 4	2 5 1	882	823
Major after 15 years' commissioned service	2 0 0	1 6	2 0	4 6	3 0	2 0	4 0	2 3	2 13 0	2 9 9	967	908
Major after 18 years commissioned service	2 2 4	1 6	2 0	4 6	3 0	2 0	4 0	2 3	2 15 4	2 12 1	1010	951
Major after 20 years' commissioned service	2 7 0	1 6	2 0	4 6	3 0	2 0	4 0	2 3	3 0 0	2 16 9	1095	1036
Lieutenant-Colonel	2 14 0	1 6	2 0	4 6	3 0	2 0	4 6	2 3	3 7 0	3 4 3	1223	1173
Lieutenant-Colonel after 3 years' commissioned service as such	2 18 10	1 6	2 0	4 6	3 0	2 0	4 6	2 3	3 11 10	3 9 1	1311	1251
Colonel	3 5 10	1 6	2 0	5 6	4 1	2 0	5 6	2 9	4 0 11	3 17 7	1477	1416
Major-General	4 9 4	1 6	4 0	11 0	5 2	2 0	11 0	3 8	5 13 0	5 9 6	2052	1998

* Pay Warrant rates as amended by Army Order 196/26, less 6 per cent. from July 1st, 1927 (vide Army Order 1 of 1927). The Pay Warrant rates are subject to revision to an extent not exceeding 20 per cent., according to variation in the cost of living. The next revision may take place with effect from July 1st, 1930.

† Rates of Allowances vary from time to time, and issues are subject to conditions laid down in the Allowance Regulations.

The maximum rates of retired pay are as follows:

Captain and Subaltern	£300
Major	£450
Lieutenant-Colonel	£600
Colonel	£800
Major-General	£1,000
Lieutenant-General	£1,200

The above rates are those laid down in the Pay Warrant. They have been reduced by 6 per cent. as from July 1st, 1927. Further revision may take place triennially to an extent not exceeding 20 per cent., according to variation in the cost of living.

Officers with seven and less than twenty years' service as medical officers may be permitted to retire with a gratuity in accordance with the following scale:

After 7 years' service as a medical officer ...	£1,000
After 3 years' service as a medical officer in the rank of major	£2,800
After 6 years' service as a medical officer in the rank of major	£3,500

Seconded Service.

An officer may be permitted to accept employment in the Foreign or Colonial Offices; when so seconded he is not eligible for pay or allowances from army funds, but his service continues to reckon towards promotion and, under certain conditions, towards increase of pay, pension, or gratuity.

Service on the West Coast of Africa.

Officers for service in West Africa are usually taken from a list of volunteers for such service. An officer at present receives, while actually serving in West Africa (which service may include ordinary leave not exceeding sixty-one days in a year, and any time spent at Madeira or the Canary Islands on sick leave), additional pay at the following daily rates: lieutenant-colonel 12s., major 9s., captain 7s. 6d., lieutenant 6s. Service on the West Coast of Africa also counts double towards voluntary retirement and the service element of retired pay under certain conditions, and also entitles to leave at home of one day for every two days' service after twelve months' continuous service on the coast up to a maximum of 365 days' leave. Continuous service includes the ordinary sixty-one days' leave and any time spent in Madeira or the Canary Islands on sick leave for this purpose.

THE ARMY DENTAL CORPS.

The corps is administered by the Director-General, Army Medical Services. It is a joint service for the Army and Royal Air Force, and the personnel is required to serve under either force and be interchangeable. Officers and other ranks posted for duty with the Royal Air Force will perform their duties under the regulations of the Royal Air Force for the employment of dental personnel, but the conditions in the following tables apply equally in either force. Promotion is carried out on one general list. The regulations for admission to the Army Dental Corps should be obtained from the Under Secretary of State, War Office, and carefully studied.

Officers: Appointment and Promotion.

1. Commissions as lieutenants in the Army Dental Corps may be given to persons duly qualified under regulations approved by the Army Council.

2. An officer shall be eligible for promotion to the rank of captain on completion of three and a half years' service and to the rank of major on completion of twelve years' service in the corps provided he has previously qualified in such manner as may be prescribed by the Army Council.

3. Promotion to the rank of lieutenant-colonel and colonel to fill the establishments laid down from time to time for those ranks shall be made by selection of the Army Council, provided the officer has previously qualified for promotion to those ranks in such manner as may be prescribed by the Army Council.

4. Appointments are in the rank of lieutenant, except in cases where service of three and a half years or more has been given as a temporary dental officer, when the rank of captain will be given, provided the officer has qualified for promotion to that rank. Service as a temporary dental officer will count towards the three and a half years for promotion to captain, and the twelve years for promotion to major.

Pay.

The following are the rates for officers of the Army Dental Corps:

	Per diem. £ s. d.
Lieutenant	0 18 10
Captain	1 3 6
Captain after 8 years' total service	1 6 4
Captain after 10 „ „ „	1 8 2
Major	1 12 10
Major, after 15 years' total service	1 17 8
Major, after 18 „ „ „	2 0 0
Major, after 20 „ „ „	2 4 8
Lieutenant-Colonel	2 11 8
Lieutenant-Colonel after 3 years' service as such	2 16 4
Colonel	3 3 6

These rates are 6 per cent. below those shown in the Pay Warrant, 1926, as amended by Army Order 196/26. The latter are subject to revision to an extent not exceeding 20 per cent., according to variation in the cost of living. The next revision may take place with effect from July 1st, 1930.

Charge Pay and Allowances.

The officer in charge of the Dental Laboratories, Aldershot, receives charge pay at the rate of 5s. a day if holding the rank of captain, or 2s. 6d. a day if holding the rank of major. The allowances for officers of the Army Dental Corps are at the same rates as for officers of the Royal Army Medical Corps.

Retirement and Retired Pay or Gratuity.

The rates of retired pay will be the same as for officers of the Royal Army Medical Corps. Voluntary retirement on retired pay will not be allowed until after twenty years' service. Earlier retirement on gratuity may be allowed as follows: After eight and a half years' service as a dental officer, gratuity of £1,000; after fifteen years' service £2,000; after eighteen years' service £3,000. Retirement will be compulsory at the age of 55 years. A lieutenant who does not qualify for promotion within three and a half years' service in the corps will be retired; and a captain who fails to qualify for promotion to major within twelve years' service in the corps will be retired on any gratuity for which he may be eligible.

ROYAL AIR FORCE MEDICAL BRANCH.

THE Air Council attaches great importance to attracting into the R.A.F.M.S. the best type of medical man, since on the capacity of the medical service depends in a peculiar degree the safety and efficiency of the Royal Air Force. The duties of these medical officers include, not only the prevention and treatment of those ordinary diseases to which the personnel of any fighting service are liable, but the special study of the mental and physical stresses imposed on the airman in diverse circumstances and climates—a new branch of medicine which still provides considerable scope for research.

As promotion to the higher ranks of the service is by selection from officers who are eligible by reason of length of service, and as a certain proportion of the higher ranks will be reserved for purely scientific as opposed to administrative appointments, it will be seen that there are excellent prospects for the young medical officer who exhibits ability and energy in scientific research, as well as for those who develop a talent for administration. The work to be done, therefore, has a high professional interest which, combined with good rates of pay and allowances, offers a career for medical men which should prove both attractive and interesting. The life is one which is certain to appeal to the man of wide outlook, who desires opportunities for travel, sport, and games, and can find interest and enjoyment in aviation. His duties will, as a matter of course, give him flying experience as a passenger, which is necessary for the proper study of the medical problems of aviation and for gaining first-hand knowledge of the conditions under which his comrades serve.

Commissions.

The establishment will consist partly of permanent and partly of short-service officers.

An officer will, on first entry, be granted a short-service commission for a period of three years on the active list (which may be extended to five years at the discretion of the Air Council, if the officer so wishes, on the recommendation of the Director of Medical Services) and of four years in the Reserve of Air Force Officers. Selections for permanent commissions will be made from officers holding short-service commissions, and those who are not selected will be transferred to the Reserve at the expiration of their period of service on the active list.

For those entrants who desire it the prospect of obtaining a permanent commission is approximately an even one. Experience has so far shown that the officers selected have included the great majority of those desirous of and suitable for retention in the service; owing to the fact that the short-service commission with its gratuity after three or five years is in itself an attraction to many entrants who desire to enlarge their experience and outlook from the point of view of subsequently entering private practice, or who, on entry, have not made up their minds to the adoption of a permanent career in the service and subsequently find that they would prefer to return to civil life.

Medical officers may be allowed to count as service their time spent in resident appointments in civil hospitals under the following conditions:

(1) An officer granted a short-service commission on or after July 1st, 1926, who at the time of application for the commission holds, or is about to hold, a resident appointment in a recognized civil hospital, may be seconded for the period, not exceeding one year, from the date when the commission is granted, during which the appointment is held. If the applicant already holds the appointment when the commission is granted, the commission may be antedated to the date on which the appointment was first held, provided (*a*) that the appointment is held for not less than one year, (*b*) that the period of secondment and the period of antedate shall not together exceed one year, and (*c*) that the antedate shall not be made until the officer has joined for actual R.A.F. duty.

(2) An officer granted a short-service commission on or after July 1st, 1926, who has previously held a resident appointment in a recognized civil hospital for a period not less than one year may, provided the commission is granted not more than six months after the termination of the hospital appointment, be granted an antedate of the commission equal to the period of the appointment up to a maximum of one year.

(3) The term "resident appointment" as used at (1) and (2) may be held to include a period of not more than six months in a non-resident appointment immediately preceding or following a resident appointment.

(4) If necessary, the ordinary maximum age for appointment to a commission may be increased by a period equal to any antedate granted under (1) and (2).

(5) An officer who has been seconded or whose commission has been antedated as above will be required to serve for a minimum period of three years on the active list from the date of joining for actual R.A.F. duty.

(6) Pay and allowances for periods of secondment or antedate will not be allowable, and such periods will not be reckoned in the assessment of gratuities payable to short-service officers. Subject to (5), however, such periods will be reckoned as commissioned service in the Royal Air Force for purposes of seniority and promotion, and, in the case of permanent officers, of retirement, retired pay, and retirement gratuities.

Officers who have been selected for permanent commissions may be permitted to attend for a period not exceeding nine months a post-graduate course in general medicine and surgery, tropical and preventive medicine, and other special subjects. Such permission may be granted at any time when the exigencies of the service permit during the first sixteen years of service, and when attending these courses officers will receive full pay and allowances.

New entrants into the R.A.F.M.S. will be commissioned as Flying Officers (Medical), and will be eligible for promotion to the rank of Flight Lieutenant (Medical) after two years' service. Officers selected for permanent commissions will normally be promoted to the rank of Squadron Leader after ten years' total service. Accelerated promotion may be granted in a limited number of cases to officers who show exceptional ability after the completion of eight years' service. Promotion within establishment to the rank of Wing Commander will be by selection at any period after sixteen years' total service, and to that of Group Captain by selection at any period after twenty-two years' service.

There will be no competitive examination on entry; candidates must be under 28 years of age, be British subjects, the sons of British subjects, and of pure European descent, and will be interviewed personally by the Director of Medical Services, Royal Air Force, before acceptance. Each candidate must produce:

1. Birth certificate.
2. Medical registration certificate.
3. A declaration containing the following information: (*a*) Age, and place of birth. (*b*) That he is a British subject, the son of British subjects, and of pure European descent. (*c*) That he is ready to engage for general service at home or abroad as required. (*d*) The qualifications he is possessed of and what medical or other appointments he has held (if any). (*e*) That he is willing to fly as a passenger whenever called upon to do so.

Each candidate will be required, before acceptance, to pass a medical examination to ensure that he labours under no constitutional or mental disease or diseases or weakness, nor any imperfection or disability which may interfere with the efficient discharge of the duties of a medical officer in any climate, in peace or war.

On appointment entrants will undergo an initial course of eight weeks, during which they will be given instruction in the special medical aspects of aviation; the organization and administration of the Royal Air Force; and the general and special duties to be performed by officers in the Medical Branch. In order to avoid the necessity for further examinations the position of entrants in order of seniority in the Air Force List will be determined at the end of the initial course by a system of marking and reports on the actual work done during their instruction.

Uniform and Equipment.

Medical officers are required to provide themselves with the uniform, service dress, and mess dress of their rank, and with the distinguishing badges of the Royal Air Force Medical Branch. The provision of full dress is entirely optional at present. An allowance of £50 towards the cost of uniform is made on joining to candidates who have not had previous commissioned service in H.M. Forces.

Pay and Allowances.

The emoluments of medical officers of the Royal Air Force are given in outline below. The standard rates of pay and retired pay were drawn up on the basis of the high cost of living in 1919, and 20 per cent. of each of the standard rates is detachable and subject to alteration, either upwards or downwards, as the cost of living rises or falls. Under this provision the current rates now in force represent a reduction of approximately 6 per cent. on the standard rates. The next revision will take effect from July 1st, 1930, and subsequent revisions will be made at intervals of three years.

Retired Pay.

The minimum period of service qualifying for retirement on retired pay is twenty years. Standard rates of retired pay are as follows:

Air Officers.—Air Vice-Marshal, £790 to £1,010 per annum; Air Commodore, £650 to £950 per annum.

Royal Air Force Medical Branch: Rates of Pay and Allowances.

Rank.	Pay.* Daily Rates. Standard.	Pay.* Daily Rates. Current.	Pay.* Per Annum (Current Rates).	Cash Allowances at Home Rates in lieu of Quarters, Rations, and Servant, if not available in kind (per annum).† Married.	Cash Allowances at Home Rates in lieu of Quarters, Rations, and Servant, if not available in kind (per annum).† Unmarried.	Pay plus Allowances (per annum). Married.	Pay plus Allowances (per annum). Unmarried.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Flying Officer	1 4 0	1 2 6	410 12 6	155 12 11	141 8 9	567 5 5	552 1 3
Flight Lieutenant...	1 6 0	1 4 6	447 2 6	206 16 8	159 13 9	653 19 2	606 16 3
Ditto, after 2 years as such	1 8 0	1 6 4	480 11 8	206 16 8	159 13 9	687 8 4	640 5 5
Ditto, after 4 years as such	1 10 0	1 8 2	514 0 10	206 16 8	159 13 9	720 17 6	673 14 7
Squadron Leader	1 14 0	1 12 0	584 0 0	205 16 8	171 17 1	790 16 8	755 17 1
Ditto, after 2 years as such	1 18 0	1 15 8	650 18 4	206 16 8	171 17 1	857 15 0	822 15 5
Ditto, after 4 years as such	2 0 0	1 17 8	687 8 4	206 16 8	171 17 1	894 5 0	859 5 5
Ditto, after 6 years as such	2 4 0	2 1 4	754 6 8	206 16 8	171 17 1	961 3 4	926 3 9
Ditto, after 8 years as such	2 8 0	2 5 2	824 5 10	205 15 8	171 17 1	1031 2 6	996 2 11
Ditto, after 10 years as such	2 10 0	2 7 0	857 15 0	206 16 8	171 17 1	1064 11 8	1029 12 1
Wing Commander	2 15 0	2 11 8	942 18 4	206 16 8	184 0 5	1149 15 0	1126 18 9
Ditto, after 2 years as such	2 17 0	2 13 6	976 7 6	206 16 8	184 0 5	1183 4 2	1160 7 11
Ditto, after 4 years as such	3 3 0	2 19 2	1079 15 10	206 16 8	184 0 5	1286 12 6	1263 16 3
Group Captain	3 10 0	3 5 10	1201 9 2	282 17 6	255 10 0	1484 6 8	1456 19 2
Air Commodore	4 0 0	3 15 2	1371 15 10	337 12 6	310 5 0	1709 8 4	1682 0 10
Air Vice-Marshal	5 0 0	4 14 0	1715 10 0	406 1 3	375 12 11	2121 11 3	2091 2 11

* Except for periods of service under Indian administration. For such periods officers receive pay and allowances at rates and subject to conditions authorized from time to time by the Government of India.

† These allowances are issued only when accommodation, fuel and light, rations and personal attendance are not available in kind. Normally, provision in kind is available for junior officers. "Married" rates of allowances are payable only to married officers who have reached the age of 30 or the rank of squadron leader. A colonial allowance is granted in certain commands abroad.

The rates and general scheme of allowances are liable to revision as circumstances may require.

Officers Below Air Rank.

Age on Retirement.	Yearly Rate of Retired Pay.	Years of Service.	Addition for each Extra Year of Service.*	Deduction for each Deficient Year of Service.*
	£		£	£
40	300	17	15	15
41	337	17	15	15
42	375	18	15	15
43	412	18	15	15
44	450	19	15	15
45	487	19	15	15
46	525	20	15	15
47	562	20	15	15
48	600	21	15	15
49	637	21	15	15
50	675	22	15	15
51	697	22	22	15
52	720	23	22	15
53	742	23	22	15
54	765	24	22	15
55	790	24	22	15

* Limited to five years.

The maximum standard rates of retired pay and the compulsory retiring ages for the several ranks are:

Rank.	Yearly Rate of Retired Pay.	Compulsory Retiring Age.
	£	
Air Vice-Marshal	1,010	60
Air Commodore	950	57
Group Captain	900	55
Wing Commander...	600	51
Squadron Leader	500	48

Gratuities.

A permanent officer allowed to retire before having qualified for retired pay may be granted a gratuity provided he has not less than ten years' commissioned service—namely, £1,500 if he has ten but less than fifteen years' commissioned service; £2,500 after fifteen or more than fifteen years'.

Short-service officers will be eligible on passing to the Reserve for gratuities on the following scale: £100 for each of the first two complete years of service, £150 for each of the third and fourth complete years, and £200 for the fifth complete year; that is, for three years' service on the active list £350; for five years' £700.

These gratuities will not be payable to officers granted permanent commissions, but their service on a short-service commission will count towards retired pay.

Further particulars may be obtained on application to the Secretary, Air Ministry (D.M.S.), Adastral House, Kingsway, W.C.2.

INDIAN MEDICAL SERVICE.

THE Lee Commission, which visited India to inquire into the prospects and remuneration of the European Services, made certain recommendations with regard to the Indian Medical Service in its report issued in May, 1924. These recommendations received careful consideration by the Government of India and the Secretary of State, and as the result the Secretary of State announced in the House of Lords that he had come to the conclusion that the recommendation of the Lee Commission that the military side of the Indian Medical Service should be absorbed in the R.A.M.C. would raise more difficulties than it would solve. He had therefore decided that the Indian Medical Service must be maintained as essentially a military service, constituted on the same broad lines as at present.

In order to maintain the necessary war reserve for the Indian Medical Service, and also to provide European medical attendance for European officers of the superior civil services and their families, as recommended by the Lee Commission, a stated number of I.M.S. officers will be lent to Provincial Governments for employment in civil posts, and the Provincial Governments will be required to employ them in addition to the officers of the Provincial Civil Medical Services, which are now to be constituted. The control of and recruitment for these Provincial Medical Services will be in the hands of the Provincial Govern-

ments, but this will not, of course, affect the conditions of service of the I.M.S. officers lent to them.

These are the broad outlines of the future organization of the medical services in India which have been announced, but certain details of the scheme are understood to be still under consideration by the Secretary of State. It is expected that the final decision will be taken before very long.

In the meantime the Secretary of State is continuing to recruit for the Indian Medical Service on the system which has been in force since the last open competitive examination in July, 1915. Appointments are made by nomination, and to assist him in making them the Secretary of State has constituted a Selection Committee, which summons and interviews such applicants as appear to be *prima facie* suitable, and makes recommendations for appointment. A similar committee has been appointed in India to investigate applications from candidates in India and to forward recommendatons to the Secretary of State. All appointments are made under the special terms which are set out below.

Special Recruitment.

The Secretary of State has announced his intention of appointing a certain number of medical men of British descent in the near future to permanent commissions in the Indian Medical Service, on the special terms set out below. Candidates must be well qualified medical practitioners over 21 and under 32 years of age. Appointment will be by nomination on the recommendation of a Selection Committee, before whom candidates will have to appear in person. The special terms are as follows:

(*a*) On completing either six or twelve years' active service in India, an officer so appointed may claim to retire on a gratuity of £1,000 or £2,500 respectively, provided that he has given notice of his intention twelve months in advance. If he does not do so, he will continue in the service on the ordinary pensionable footing. If an officer applies and is permitted to retire at any time between the completion of his sixth and twelfth years of service, or between the completion of his twelfth and seventeenth years of service, he will be eligible for a gratuity of £1,000 only, or £2,500 only respectively. In addition to actual service only privilege leave (that is, leave on full pay for sixty days in each year) will be allowed to count towards the period of six or twelve years required for the gratuity, and not ordinary furlough or sick leave.

(*b*) Officers so appointed will be eligible for the passage concessions set forth in the Provisional Regulations, except that no concession passage will be granted before the completion of five years' service, and then only if the officer has not given notice to retire in accordance with the preceding sub-paragraph. Otherwise he will be provided with a free passage for himself and his family to the United Kingdom or to any port in the British Empire to which he may wish to proceed, on the completion of six years' service. Similarly, on the completion of eleven years' service an officer will become eligible for a second concession passage if he has not given notice as above, or he will receive free passages to the United Kingdom or any port in the British Empire if he retires on completion of twelve years' service. Passages granted on retirement must be claimed within three months of the date of retirement. An officer invalided home on sick leave during his first twelve years of service will be granted a free passage, but any such passages granted to him will count against any concession passage or passages to which he may be entitled. But if he retires otherwise than on account of ill health before becoming entitled to benefits under the passage rules, he will be required to refund the cost of the passages granted for sick leave.

In view of the reorganization of the Indian Medical Service which is now under consideration, only military employment can be guaranteed to officers entering the I.M.S. at the present time. They will, however, be eligible for the benefits of any conditions regarding civil employment which may be made applicable to officers in future appointed to the I.M.S. as the result of decisions taken on the Lee Commission Report.

In all other respects the ordinary rules and conditions, as set forth in Regulations for the Appointment of Candidates to Commissions in the I.M.S., will apply. Officers retiring on a gratuity after twelve years' service will be liable, equally with those retiring on pension, to recall to military duty in case of emergency up to 55 years of age. They would only be recalled to duty in the event of an emergency which exhausts the capacity of the reserves permanently maintained in civil employ in India.

The officers appointed will sail for India early next year. It is hoped to arrange for them to attend a course of instruction before doing so.

Application forms and any further particulars desired may be obtained from the Secretary, Military Department, India Office, Whitehall, S.W.1. Envelopes should be marked "Medical Recruitment."

PRISON MEDICAL SERVICE.

CANDIDATES for the medical staff are approved by the Secretary of State for the Home Office on the recommendation of the Prison Commissioners. The Chairman of the Board is Mr. M. L. Waller, C.B. Application for employment may be made to the Board on a special form, which can be obtained from the Secretary, Prison Commission, Home Office, London, S.W.1.

In the smaller prisons the medical officer is usually a local practitioner, but in the larger the members of the medical staff are required to devote their whole time to the service. In the case of those required to give their whole time to the service the appointment in the first instance is to the post of medical officer Class II, and from the seniors of this rank the medical officers Class I are selected as vacancies occur.

In February, 1923, the then Home Secretary appointed a committee to report on what changes, if any, should be made in the remuneration or other conditions of service of officers at the prisons and Borstal institutions in England and Scotland and at Broadmoor Criminal Lunatic Asylum. Evidence was given on behalf of the British Medical Association by the Medical Secretary, who pointed out that the salary offered to Class II medical officers—namely, a basic salary of £300 rising by annual increments—was, even when the allowances and bonus were reckoned in, less than the £500 a year the Association looked upon as the minimum commencing salary which should be given to a whole-time medical man holding such a responsible office. The committee issued its report in November, 1923. It recommended that officers of both classes should receive an additional £50 a year, and from a communication received from the Prison Commission we understand that the pay of the whole-time prison medical staff is: Medical officer Class II, £350, rising by annual increments of £20 to £600; medical officer Class I, £650, rising by annual increments of £25 to £800. Unfurnished quarters are provided, or an allowance in lieu is made. The civil service bonus is paid on the salary. There are 15 medical officers Class II, 12 medical officers Class I, and 23 part-time medical officers.

The number of vacancies is never large, and promotion is slow.

MEDICAL PRACTICE IN BRITISH DOMINIONS AND FOREIGN COUNTRIES.

MEDICAL Acts have now been passed in almost all places forming part of the British Empire beyond the seas, and registers of duly qualified practitioners are consequently maintained. To these registers medical men educated in the United Kingdom are always admissible merely on payment of a registration fee, providing they produce evidence that they are of good repute and are either registered or eligible for registration in the United Kingdom, as the local requirement may be. The only exception to this statement that need be made relates to the Dominion of Canada. Each of its provinces acts in medical matters as an independent State. The result has been that reciprocity of practice has in the past been established between this country and all the provinces of Canada except British Columbia, where certain obstacles still remain to be overcome. It has, however, to be recorded that reciprocity with Saskatchewan and New Brunswick has recently been brought to an end by those provinces, and the arrangement with Quebec is also likely to be ended shortly owing to their action. We would advise any medical man proposing to practise in Canada first to communicate with the Provincial Registrar, stating what degrees or diplomas he holds, and asking for information as to the precise steps he must take in order to obtain admission to the Provincial Register. The Licence of the Dominion Council, which can only be obtained after examination, entitles its holder to practise in any of the provinces of Canada, though in regard to Quebec there is a proviso that "he must have been registered in the province five years prior to the application for the recognition of the Dominion Licence." In order to sit for the examination for the Dominion Licence, it is necessary to obtain a licence from one of the provinces, but this can be obtained from one of those with whom reciprocity has been established.

Italy and Japan are the only two foreign States with which complete medical reciprocity has been established, though there are other countries which grant a limited recognition to British qualifications. Generally speaking, in Continental countries (with the exception of the kingdom of Italy) a British medical man desiring to exercise his profession therein must pass practically the same examinations as those imposed on natives of the country. The same observation applies to all foreign States in the South American continent. Each of the United States of North America has its own laws and regulations governing medical practice; and all of them require the holder of a British qualification to submit to an examination. The States of New York and Indiana require an applicant to be naturalized.

A pamphlet showing the conditions under which medical and dental practitioners legally qualified in their own country may practise abroad can be obtained from the office of the General Medical Council, 44, Hallam Street, Portland Place, London, W.1, price 2s. 6d., or 2s. 9d. post free in the United Kingdom. Practitioners who think of going abroad to practise will find therein much useful information, including the name of the official in each country to whom requests for further particulars should be addressed. A new edition in which all the information has been brought up to date has just been published (1927).

MEDICAL APPOINTMENTS IN THE COLONIES AND MANDATED TERRITORIES.

MEDICAL appointments in the self-governing Dominions and the territories under their control, and in Southern Rhodesia, are made by the Governments concerned, and are not in general open to candidates in the United Kingdom. Appointments to the medical services of the colonies and other territories under the administrative direction of the Colonial Office are, apart from those in Ceylon, Mauritius, Jamaica, Barbados, the Bahamas, Bermuda, and Malta, which are filled locally, made by the Secretary of State for the Colonies in this country. Such appointments are to a given colony or colonies, for there is no unified service directly administered from the Colonial Office. It follows that conditions of service and superannuation are in the main determined by the economic resources and general public health policy of the individual colony and its local Government, and vary almost as widely as do conditions of climate. Moreover, the extent of the control exercised by the Colonial Office varies according to the constitutional status of the particular colony, and the detailed information available centrally is not always either up to date or complete. The intending candidate, therefore, should make comprehensive inquiries as to local conditions, and particularly as to facilities for private practice where this is included in the terms of appointment. He will also do well to supplement official information by reference to the central office of the British Medical Association, where reports obtained from time to time from the local Branches are available. This is the more necessary because facilities for transfer from the Medical Service of one colony to that of another are as yet practically non-existent, except in connexion with a few specialist and senior appointments; this sets strict limits upon the opportunities for promotion.

To those physically and mentally suited for the climatic and social conditions peculiar to the various colonies the Colonial Medical Services should, and in some cases do, offer a field of professional activity rich in interest and in opportunity for pioneer work. The scope for research is wide, and facilities for its prosecution are beginning, however tardily, to be provided. An increasing number of specialist posts is becoming available in the larger services, and the general policy is to fill them by promotion of suitably qualified junior officers. The potentialities of sanitation are beginning to be appreciated by local administrations, however vaguely. But, when all is said, it cannot be contended that conditions in the Colonial Medical Services are generally satisfactory. In some instances, indeed, they can only be characterized as intolerable. Hence the necessity for very full inquiry before accepting appointment. It is true that the post-war economic stringency to which the delay of essential reform was usually attributed is giving place to more favourable conditions. There are also signs of increasing parliamentary and departmental interest in the development of a sound health policy. Amongst these the most significant is perhaps the recent appointment by the Secretary of State, in consultation with the Medical Research Council, of a Committee "to advise the Secretary of State and the Medical Research Council upon the initiation and promotion of medical research in the interests of the Colonial Empire; upon the recruitment and conditions of service of the necessary personnel; and upon the management and allocation of any funds available for these purposes." The appointment of a chief medical adviser to the Secretary of State for the Colonies has also had its effect. We are confident that the work of this officer will contribute greatly to the establishment of conditions making for efficiency and well-being in the Colonial Medical Services. Meanwhile, those services are too often hampered by conditions which make efficiency unattainable. At the worst they are in some colonies starved of material resources in the name of economy, understaffed, and underpaid, with inadequate facilities for study leave, and at the mercy of an administration in which the nominal head of the service has no effective voice. Hence the urgent necessity for making careful and sufficient inquiry as to the position in any given service before appointment is accepted.

The medical services recruited in this country by the Secretary of State for the Colonies include those of West Africa, East Africa, Malaya, Hong-Kong, the West Indies, Fiji and the Western Pacific Colonies, and Palestine, besides a number of small services offering individually one or two appointments at an inadequate remuneration and with no prospects of promotion. The recent revision of the conditions of the Fiji Medical Service shows a distinct improvement in this colony. The basic salary of the district medical officers is £500 by £25 to £725, and although this is below the £600 minimum recommended as adequate by the British Medical Association this fact is offset by the concession of allowances of from £175 to £275 in five of the districts, the value of private practice in the remaining seven being estimated at from £200 to £600 a year. The services in the West Indies and some of the smaller colonies have not yet conceded the £600 minimum commencing salary, and whilst facilities for remunerative private practice, general conditions of service, and a relatively low cost of living must in some instances be taken into consideration, these compensations are by no means universal. The services in the Leeward and Windward Islands are in a condition which requires special notice by way of warning.

In general, candidates for these services must be between the ages of 23 and 35, although these limits are not for the moment absolute. A candidate over 35 years of age, if accepted for appointment, may be required to serve on a temporary and non-pensionable footing; regular appointments are, subject to a varying period of probation, for the most part classed as permanent and pensionable. There is no entrance examination, but practitioners selected for appointment must obtain a certificate of physical fitness from one of the Medical Advisers of the Colonial Office. Post-graduate experience in hospital appointments is desirable, and in some cases special allowances are conceded to the holders of a D.P.H. or other additional qualifications. Successful candidates for the West African Medical Staff, the East African Medical Service, and the Malayan Services are, in general, required to undergo an approved course of instruction in tropical medicine. The cost of this, subject to a minimum period of service being performed, is met by the Colonial administrations.

The bulk of the appointments made by the Secretary of State in this country are to the West African Medical Staff, the East African Medical Service, and the Medical Services in Malaya. These are the strongest individual services numerically, and therefore offer more frequent vacancies, better prospects of promotion, and better chances of specialist appointments than the smaller services.

WEST AFRICAN MEDICAL STAFF.

This is amongst the best organized and best paid of the Colonial Services, though at present it appears to be understaffed. The territories covered by the service include Nigeria, the Gold Coast, Sierra Leone, and the Gambia. Climatic conditions vary considerably over this area, but they are in general admittedly trying. This fact is at present recognized by the provision of more frequent leave periods than are usual elsewhere. The growing opinion that conditions are less adverse than they have been in the past is marked by a proposal to extend the tours of service. This proposal has not, however, found favour with the authorities for the time being. The rate of pay for a medical officer is £660 on appointment, rising by annual increments to £960. There are, in addition, certain seniority and duty allowances, and there are a number of specialist and administrative posts carrying relatively high salaries. The pension after 18 years' service is £570. Gratuities of £1,000 or £1,250 may be drawn on retirement after 9 or 12 years' service. Members of the West African Medical Staff are not permitted to take their wives or young children to the West Coast until they have acquired experience of the conditions of life and have obtained the sanction of the Governor. In the case of young children this is only exceptionally given.

EAST AFRICAN MEDICAL SERVICE.

This service includes Kenya, Uganda, Tanganyika Territory, Nyasaland, Zanzibar, and British Somaliland. In East Africa there is very wide scope for clinical work, both medical and surgical, as well as for research and for preventive medicine and sanitation. The service as a whole is fully alive to its responsibilities and opportunities; individual initiative is encouraged, and the career of a medical officer depends, not on seniority alone, but to a large extent on his own capability. As a rule it is preferable that medical officers on first appointment should not be married, although in all but a few stations conditions allow a medical officer's wife to accompany him. The service includes a medical and a sanitary division. The former is open to those holding ordinary medical and surgical qualifications, post-graduate experience in a hospital appointment being an advantage; posts in the sanitary division will as far as possible be filled by those holding a Diploma in Public Health. Climatic conditions vary considerably. In the greater part of Kenya they approximate more to the temperate than the tropical zone; but there are some areas in the East African Dependencies where conditions more closely resemble those in West Africa. The rate of pay for a medical officer is from £600 on appointment, rising by annual increments of £30 to £840, and thereafter, subject to an efficiency bar at this point, by £40 to £920. Holders of the D.P.H. receive a special concession of two increments on appointment, thus reaching the maximum of the grade two years earlier than they would otherwise do. Private practice may be permitted in certain circumstances, but there is no right to private practice even in those stations where opportunities for such practice may exist.

Whilst a candidate can only apply for appointment to the East African Medical Service in general and is liable to transfer between the several dependencies, he may express his preference for any particular colony and his wishes will, we are informed, be met as far as possible. As a rule transfer only takes place on promotion or at an officer's own request. The gratuities available on retirement after nine or twelve years' service are similar to those for the West African Medical Staff. An officer retiring after twenty years' service at the maximum of the grade of medical officer receives a pension of £523 a year.

MEDICAL SERVICES IN MALAYA.

These services cover the Straits Settlements, the Federated Malay States, and some of the unfederated States. Certain reforms have recently been effected in the Malayan Services, and whilst that in the Federated Malay States still suffers from the inclusion of the Medical Department in the general decentralization of administration carried out since the war, the new commencing salary of 500 dollars a month, *plus* an allowance of 10 per cent. for single and 20 per cent. for married officers, is generally considered adequate. A non-pensionable allowance of 100 dollars a month is paid to officers holding the Diploma in Public Health. The service should now offer considerable scope to suitable candidates.

SUDAN MEDICAL SERVICE.

This service is a department of the Sudan Government, and includes a number of Syrian medical officers and a number of assistant medical officers who are natives of the Sudan. The British medical inspectors are from the outset senior to all other medical officers. The Sudan is entering on a period of rapid development and expansion, to which the medical services of the country must necessarily make an important contribution. The service offers ample opportunities for specialization and for research, as well as for general medical and surgical work. The ordinary duties of a medical inspector may be summarized as follows:

(1) To act as a consulting surgeon and obstetrician in all cases submitted to him by his medical staff. This necessitates considerable surgical experience.

(2) To initiate, organize, and supervise all medical and sanitary work in his province. This includes extensive antimalarial work and often the supervision of large irrigated areas.

(3) To carry out the medical supervision of schools and the examination of candidates for Government service and pension.

(4) To train assistant medical officers and native sanitary overseers, and to advise and direct medical officers in the carrying out of their duties.

(5) Probably, at a later date, to take part in teaching at the School of Medicine at Khartoum.

The climate varies, but is not in general unfavourable, though hot. In the northern desert the nights are cool, even in the summer; in the central there is a rainy season of about four months, during which large areas become malarious. The southern area is more tropical in character, and mosquito-protected houses, nets, and protective quinine are essential during the greater part of the year, though the winter months are cool and pleasant. It is not considered desirable for medical inspectors to be accompanied by their wives until they have gained some knowledge of the language and the general conditions of life.

The commencing pay of a medical inspector is £E.720.* On confirmation of appointment and success in the requisite examinations in Arabic the salary is increased by periodic increments to £E.1,200. There are four senior administrative posts carrying higher salaries. There is a compulsory contribution of 5 per cent. of pay towards pension, which, for a medical inspector, amounts, after twenty years' service, to £E.500 a year.

PALESTINE.

A few of the senior posts in the Health Department of the Government of Palestine are recruited in this country. The scales of pay vary between £E.550-25-750 for an assistant senior medical officer and £E.1,200 for the director.

OFFICIAL SOURCES OF INFORMATION.

All inquiries in connexion with medical appointments in the self-governing Dominions and their dependencies should be addressed to the High Commissioners or Agents-General for the Dominions. Intending applicants are also recommended to consult the Colonial Office List, which may be seen at the Colonial Office Library or at the central office of the British Medical Association if not otherwise available, and the Professional Handbook (price 9d.) issued by the Overseas Settlement Office, Caxton House, Tothill Street, London, S.W.1.

Recent developments seem to suggest the possibility of a few appointments becoming available under the Egyptian Government. Questions about any such appointments should be addressed to the Director-General, Public Health Department, Cairo.

Inquiries as to vacancies and conditions in the Sudan Medical Service should be addressed in the first instance to Dr. T. D. Acland, 19, Bryanston Square, London, W.1.

All inquiries in connexion with Colonial medical appointments made by the Secretary of State for the Colonies, or

* £E.=£1 0s. 6d. sterling. This figure represents exchange value, not purchasing power.

such vacancies as may occur in Iraq, Palestine, or Aden, should be addressed to the Private Secretary (Appointments), Colonial Office, 38, Old Queen Street, London, S.W.1.

There remain a number of medical appointments made by mining companies and other commercial undertakings in various parts of the tropics. Much caution should be exercised in accepting such posts, and the form of contract should be subjected to very careful scrutiny. Advice in this connexion should always be sought from the Medical Secretary's Department of the British Medical Association, British Medical Association House, Tavistock Square, London, W.C.1.

MEDICAL RADIOLOGY AND ELECTROLOGY.

THE CAMBRIDGE DIPLOMA.

A DIPLOMA in Medical Radiology and Electrology is granted by the University of Cambridge. The primary object is to provide adequate training in a branch of medical work which is becoming increasingly important and difficult, and which is outside the ordinary medical curriculum. The diploma is open only to those who hold a medical qualification, and includes a course of lectures and practical work in Physics (Part I) and in Radiology and Electrology (Part II). Attendance at the necessary courses of lectures in both subjects, and in addition six months' clinical experience in an adequately equipped hospital recognized by the Diploma Committee, is essential. The whole course of study takes six months, the lectures, practical work, and hospital attendance running concurrently.

The courses carried out by the University of Cambridge are at present arranged to begin early in January. Three months are spent at Cambridge doing the lectures and practical work in Part I, and attending the systematic lectures in Part II and the practice of Addenbrooke's Hospital, where there is a fully equipped and up-to-date *x*-ray and electrological department. The remaining three months can be completed at any hospital recognized by the Diploma Committee for this purpose, a list of which can be obtained, but special arrangements are made for students to continue their studies in London, where demonstrations at various hospitals are arranged, in order to give a wide experience.

In addition, an independent six months' course is arranged by the British Institute of Radiology. This course is held entirely in London, but is recognized by the University as qualifying for the examination; it begins early in October.

Further particulars as to the Cambridge courses can be obtained from G. Stead, M.A., Cavendish Laboratory, Cambridge, and of the London courses from Stanley Melville, M.D., at the Offices of the British Institute of Radiology, 32, Welbeck Street, London, W.1.

THE EDINBURGH DIPLOMA.

Candidates for the Diploma must be graduates in medicine and surgery of the University of Edinburgh, or hold corresponding registrable degrees or qualification from some other licensing body. Candidates are not admitted to the examination for the Diploma until after the lapse of not less than one year from obtaining a registrable qualification, which qualification must be registered before admission to the examination.

The course of study begins in October and extends over a period of not less than three terms. The examination, which is written, oral, and practical, is in two parts: (*a*) Physics, and (*b*) Radiology. The examination is held twice yearly—namely, July and October. Full particulars may be obtained from the Dean of the Faculty of Medicine.

MEDICAL MISSIONARIES.

MISSIONARY societies are in constant need of qualified men and women to fill vacancies as they occur in their hospitals, and also to enable them to take advantage of fresh openings. To those suitably endowed the mission field offers unique opportunities for interesting work, and the development of native medical schools, as training institutions in connexion with some of the larger mission hospitals, affords excellent scope for valuable work to medical men and women who are qualified to teach. It is not usually expected that medical missionaries should take a position such as would otherwise be occupied by an ordained clergyman or minister, but it is essential that they should be prepared to exert their influence in any hospital to which they may be sent so that a Christian atmosphere may be maintained and the work of evangelization be carried on through the ministry of healing.

As for scientific and other qualifications for the work, medical missionaries, in addition to being physically capable of sustaining a life which makes a great demand upon their strength, should be thoroughly well trained physicians and surgeons. It is very desirable that they should have held a resident appointment at a general hospital, and have a good knowledge of practical surgery, gynaecology, tropical medicine, and the treatment of eye diseases. Useful information can be obtained from the secretaries of the various Missionary Societies, or from Thomas Cochrane, M.B., C.M., Honorary Secretary, British Advisory Board on Medical Missions, 1, Tudor Street, London, E.C.4.

Dental Surgery.

UNTIL the passing of the Dentists Act, 1921, the profession of dentistry in this country was regulated by enactments very closely similar to those relating to the practice of medicine—that is to say, there was no direct prohibition of the act of practice; and the Dentists Act of 1878 gave the same degree of protection to legally qualified and registered dentists as was accorded to registered medical practitioners—namely, the reservation of the use of certain titles. This Act also provided (1) that no person should take or use the name or title of "dentist" (either alone or in combination with any other word or words) or of "dental practitioner," or any other name, title, or description expressed in words or by letters implying that he was specially qualified to practise dentistry, unless he was registered, under a penalty of £20; and (2) that an unregistered person could not recover any fee or charge in respect of any dental operation, attendance, or advice. But, in the case of the practice of medicine by unqualified and unregistered persons, certain deterrent factors came into play—such as the inability to give a death certificate—and these did not operate to the same extent in the case of dentistry; hence, unqualified practice was far more prevalent in dentistry than in medicine, and increased after a decision of the House of Lords placing a narrow interpretation upon the words "specially qualified to practise dentistry," by defining the word "qualified" as not referring to competence but to the possession of a recognized diploma.

THE DENTISTS ACT, 1921.

This unsatisfactory position has now been remedied by the passing into law of the Dentists Act, 1921; its provisions are based largely on the recommendations of a departmental committee appointed in 1917 by the Privy Council "to investigate the extent and gravity of the evils connected with the practice of dentistry and dental surgery by persons not qualified under the Dentists Act." Since November 30th, 1922, no person has been permitted by law to practise or hold himself out, whether directly or by implication, as practising or as being prepared to practise dentistry unless he is on the *Dentists Register* provided for by the Dentists Act, 1878. The practice of dentistry is defined as including "the performance of any such operation and the giving of any such treatment, advice, or attendance, as is usually performed or given by dentists," and the performing of any operation or the giving of any "treatment, advice, or attendance on or to any person as preparatory to or for the purpose of or in connexion with the fitting, insertion, or fixing of artificial teeth." The maximum penalty incurred by an unregistered dentist is £100 for each offence. There are, however, certain important exceptions to the requirement of registration. A registered medical practitioner may practise dentistry without being on the *Dentists Register*, and a registered

pharmaceutical chemist or chemist and druggist may extract a tooth where the case is urgent and where no doctor or dentist is available, but the operation must be performed without any kind of anaesthetic; further, any person may carry out minor dental work in a public dental service under the personal supervision of a registered dentist provided it is in accordance with conditions approved by the Minister of Health after consultation with the Dental Board.

Certain persons other than those qualified by examination were entitled to be registered under the new Act. They had to be of good personal character and 23 years of age before July 28th, 1921 (the commencement of the Act), and to have been engaged for five of the seven years preceding that date as their principal means of livelihood in the practice of dentistry in the British Isles, or have been admitted to membership of the Incorporated Dental Society not less than one year before the commencement of the Act. The passing of "the prescribed examination in dentistry" within two years of the commencement of the Act was considered as equivalent to practising for five years, and a registered pharmaceutical chemist or a chemist and druggist who immediately before the commencement of the Act had a substantial practice as a dentist, including all dental operations, was treated as though he had practised for five years. A dental mechanic who for the five years had been carrying on his work as such and has secured the entry of his name on the list of candidates for examination can be registered provided within ten years of the commencement of the Act he passes the prescribed examination. The Board, however, has no power now to consider any further applications under this Act.

Dentistry may be carried on by a corporate body provided the majority of the directors and all the operating staff are registered dentists, and that no business other than dentistry or only some business ancillary to dentistry is carried on by the company. Companies carrying on the business of dentistry at the present time are permitted to continue to do so with certain restrictions, provided that the name of the company as well as the names of the directors have been entered in a list kept by the Registrar for that purpose. Every director or manager of a company convicted of an offence under the Act will be held to be guilty of the offence unless he proves that the offence was committed without his knowledge, and the court may, in addition to a fine, order that the name of any director convicted shall be removed from the list of directors aforesaid.

A subsequent Act passed in 1923 made provision for the registration of persons who were 21 in November, 1921, who had served during the late war in His Majesty's Forces, and were on that date engaged as their principal means of livelihood in the practice of dentistry in the British Isles. The Board, however, has no power now to consider any further applications under this Act.

THE DENTAL BOARD.

The Dental Board of the United Kingdom was established for the purpose of administering the new Act. The first members of the Board, who held office for three years, were all appointed, but their term has now come to an end. The Board consists of: the chairman, appointed by the Privy Council; three members appointed by the General Medical Council, who must be members of the Branch Councils for England, Ireland, and Scotland respectively; three persons who are neither medical practitioners nor dentists, appointed to represent England, Scotland, and Ireland; and six elected members, one of whom represents the qualified dentists in England and Wales, one those in Scotland, and one those in Northern Ireland, and two all the dentists registered under the Acts of 1921 and 1923.

On the establishment of the Dental Board in 1921 certain powers and duties of the General Medical Council were transferred to it, including the duty of erasing from the *Dentists Register* any entry which has been incorrectly or fraudulently made. An inquiry into the case of a person alleged to be liable to have his name erased from the *Register* is made by the Board, which reports its findings to the General Medical Council, the order directing the erasure being made by the Council. A name erased from the *Register* can only be restored by the Council upon a report made by the Board. An appeal to the High Court may be made by any person aggrieved either by refusal of the Board to register his name or by the removal of his name from the *Register*. The administrative expenses of the Board are defrayed from the registration fees and annual retention fees, but any surplus may be allocated to purposes connected with dental education and research or to any public purpose connected with dentistry. The office of the Dental Board is at 44, Hallam Street, London, W.1.

The *Dentists Register* for 1927 contains the names of 14,395 persons, of whom less than a half are registered with qualifications, 7,926 names having been registered under the provisions of the Dentists Acts, 1878, 1921, and 1923, and 6,469 with medical, surgical, or dental qualifications.

DENTAL EDUCATION AND EXAMINATION.

The preliminary examination in arts is the same for medical and dental students, and the early stages of their education embrace much the same subjects[1]; and, as the dental student is required to obtain a knowledge of the broad principles of medicine and surgery, it is necessary for him to pursue some portion of his studies at a medical school as well as at a special dental school, the latter not undertaking the teaching of these subjects. Registration as a dental student is not in all cases compulsory, though it is to be advised as convenient as affording proof of the commencement of professional education, and it is required by most of the licensing bodies, all of whom insist upon a curriculum covering four academic years.

Degrees in dentistry are granted by the Universities of Bristol, Durham, Leeds, Liverpool, Sheffield, Queen's University, Belfast, and the National University of Ireland, as will be found stated in the articles on these universities. Licences in dentistry entitling the holder to be registered on the *Dentists Register* are granted by the Universities of Birmingham, Bristol, Durham, Leeds, and Belfast, and by the Royal Colleges of Surgeons of England, of Edinburgh, and of Ireland, and by the Royal Faculty of Physicians and Surgeons of Glasgow.

Recognized dental schools are numerous. In London there are those connected with the Royal Dental Hospital, Leicester Square; the National Dental Hospital (now the University College Hospital Dental School), Great Portland Street; Guy's Hospital; King's College Hospital; and the London Hospital. In the provinces there are the Birmingham Dental Hospital; the Royal Infirmary and the General Hospital, Bristol; the Dental Hospital, and the Public Dispensary, Leeds; the Dental Hospital, Liverpool; the Dental Hospital, Manchester; the Dental Hospital and School, Newcastle-on-Tyne; the Royal Hospital, Sheffield. In Scotland there are the Dental Hospital, Dundee; the Incorporated Dental Hospital and School, Edinburgh; and the Incorporated Dental Hospital, Glasgow; and in Ireland, the Incorporated Dental Hospital of Ireland and the Royal College of Surgeons in Ireland.

A list of dental schools and their officials will be found in the article on the General Medical Council at page 388.

There are considerable variations in the order in which the different licensing bodies require the various subjects of the curriculum to be taken up, and every prospective dental student should study, not only the regulations of the General Medical Council, but also those of the body whose licence he hopes to obtain. This is the more important as in the case of some licensing bodies changes in the curriculum have been made or are contemplated.

All who think of becoming dentists may be advised to study a Memorandum, lately drawn up for their guidance by the Registrar of the Dental Board, setting out in convenient form and in untechnical language information for which request is frequently made to the Board.[2] It will be seen from this pamphlet that in order to assist suitable students the Dental Board has instituted a system of bursaries to pay the fees of those who have not the financial means to qualify, and in some cases maintenance is given as well. Detailed information regarding these exceptional facilities may be had from the Registrar of the Board at the address given above. The passing of the Dentists Act, 1921, together with the disciplinary and other action taken by the Dental Board, have already much enhanced the status of dentistry, which is now taking its proper place among the learned professions. In these circumstances a large increase in the number of dental students is desirable. The prospects are bright for those who take up their studies in the near future. The importance of dentistry to health is being more realized every day, and in consequence an increasing demand for the services of dentists may be confidently anticipated.

Recommendations of the General Medical Council.

The Dentists Act still leaves to the General Medical Council the duty of controlling the course of study and examinations required for dental qualifications.

The following recommendations as to the course of study

[1] See the Registrar's Memorandum on Students' Registration printed in the article on the General Medical Council at page 387.

[2] *Memorandum by the Registrar on the Procedure to be Adopted by Those who Desire to Enter the Profession of Dentistry, with Notes on Costs and Prospects.* 1927. Dental Board of the United Kingdom, 44, Hallam Street, W.1. Price 1s. post free.

and examinations to be required of candidates for degrees or licences in dentistry or dental surgery were adopted by the Council on May 27th, 1922.

Preliminary Examination and Registration.

1. That every dental student shall, at the commencement of his studentship, be registered in the manner and under the conditions prescribed for medical students.

2. That before registration in the *Dental Students Register* every applicant shall be required to have passed, in addition to the examination in general education, which shall be the same as that required for medical students, an examination in Elementary Physics and Elementary Chemistry, conducted or recognized by one of the licensing bodies, which shall also be the same as that required for medical students.

3. That before registration as a dental student every applicant shall produce evidence that he has attained the age of 17 years.

Professional Study.

4. That every candidate for a degree or licence in dentistry or dental surgery shall be required before admission to the final or qualifying examination to produce certificates showing:

(i) That he is at least 21 years of age.

(ii) That he has been registered as a dental student.

(iii) That he has, subsequently to the date of registration as a dental student, been engaged in professional study for at least four years, of which three years at least shall be spent at a school or schools recognized for professional study by one of the licensing bodies.

(iv) That, subsequently to the date of registration as a dental student, he has attended at a recognized medical school courses of instruction, which shall be the same as those required for medical students, in the following subjects: (*a*) Chemistry, and (*b*) Physics, in their application to medicine; (*c*) Elementary Biology. That he has attended at a recognized medical school courses of instruction in the following subjects: (*d*) Human Anatomy (with dissections and demonstrations) for three academic terms; (*e*) Physiology (with laboratory instruction, including Practical Histology) for two academic terms; (*f*) General Pathology (including Bacteriology) for two academic terms; (*g*) Medicine for two academic terms; (*h*) Surgery for two academic terms; (*i*) the practice of a recognized general hospital or hospitals of not less than eighty beds, with certified instruction in Clinical Medicine and Clinical Surgery, for four academic terms.

(v) That he has attended at a recognized dental school courses of instruction in the following special subjects: (*a*) Dental Anatomy and Physiology, human and comparative. The course should comprise a minimum of twenty meetings of the class. (*b*) Practical Dental Histology and Morbid Histology. The course should comprise a minimum of sixteen meetings of the class. (*c*) Dental Pathology and Surgery. The course should comprise a minimum of twenty meetings of the class. (*d*) Dental Materia Medica and Therapeutics. The course should comprise a minimum of sixteen meetings of the class. (*e*) Dental Metallurgy (with practical work and demonstrations). The course should comprise a minimum of twenty meetings of the class. (*f*) Dental Mechanics (with practical work and demonstrations). The course should comprise a minimum of twenty meetings and twenty demonstrations. (*g*) A course of instruction in the use of Anaesthetics, general and local, employed in dental practice. (*h*) A course of instruction in Radiology as applied to dentistry.

(vi) That he has for at least twenty-four calendar months attended, during the ordinary academic terms, the practice of a recognized dental hospital or of the recognized dental department of a general hospital.

(vii) That he has received for not less than twenty-four calendar months, or for 2,000 hours, practical instruction in dental mechanics.

Professional Examinations.

5. That the examination for a degree or licence in dentistry or dental surgery shall be partly written, partly oral, and partly practical, and shall include the following subjects: (*a*) Chemistry, Physics, and Biology, in their bearing on Medicine and Dentistry. (*b*) Human Anatomy and Physiology. (*c*) General Pathology, including Bacteriology. (*d*) Medicine and Surgery. (*e*) Dental Anatomy and Physiology, Dental Pathology, Dental Surgery (including Orthodontics), Dental Materia Medica and Therapeutics, and Dental Mechanics and Dental Metallurgy. (*f*) Practical Examination in Dental Surgery. (*g*) Practical Examination in Dental Mechanics and Metallurgy. (*h*) Anaesthetics, general and local, employed in dental practice.

6. That the prescribed subjects of examination may be combined or distributed at the discretion of the licensing bodies, and may be taken at two or more successive stages during the course of professional study; provided that no candidate shall be admitted to any final examination in dental surgery and dental mechanics until he shall have completed the required four years' course of study.

ACKNOWLEDGEMENT.

THE detailed information published in this Educational Number of the BRITISH MEDICAL JOURNAL for the benefit of intending students of medicine and newly qualified practitioners has been revised throughout with the co-operation of the deans and secretaries of the medical schools and kindred institutions and of officials in the several public services, to all of whom we wish to acknowledge our indebtedness.

DEATH REGISTRATION.

THE Births and Deaths Registration Act, 1926, which came into force on July 1st last, makes alterations in the manner of certification of deaths and the disposal of bodies. The new provisions were fully explained in an article published in this JOURNAL of June 18th (p. 1118). We shall here refer only to the medical practitioner's duty in respect of the delivery of the death certificate.

Under the Births and Deaths Registration Act of 1874 a registered medical practitioner was required, in the case of the death of any person who had been attended by him during the person's last illness, to give a certificate stating to the best of his knowledge and belief the cause of death. Hitherto the custom has been for the certifying medical practitioner to hand the certificate to a person liable to act as informant of the death for registration purposes, usually a relative or friend of the deceased. The difference in this respect made by the new Act is that henceforth it will be the duty of the medical practitioner to give such person only a written notice that he has signed the death certificate. The words of the Act are, that every such certificate

"shall be delivered forthwith by the registered medical practitioner by whom the certificate is signed to the registrar, and the registered medical practitioner, on signing a certificate as aforesaid, shall give in the prescribed form to some person required by the Births and Deaths Registration Acts, 1836 to 1901, to give information concerning the death, notice in writing of the signing of the certificate, and that person shall, except where an inquest is held on the body of the deceased person, deliver the said notice to the registrar."

The practitioner appears to have two alternative modes of fulfilling the obligation to deliver the certificate to the local registrar direct: he may himself hand it to the registrar or he may post it in an official franked envelope supplied to him by the registrar. Posting is recognized in other connexions as a legal means of delivery.

With regard to cases in which the medical practitioner considers it proper that the facts should be referred to the coroner, it has been the custom of many medical men to refrain from giving a death certificate. Probably this was never in accord with the law, but the point is now made quite clear by the insertion on the back of the death certificate form of a statement, which in an appropriate case the practitioner must initial, stating, for the information of the registrar, that he has reported the case to the coroner. The reporting of a case to the coroner does not justify the omission to give a certificate of the cause of death and to deliver it to the registrar. On receipt of a death certificate endorsed with the statement initialled by the practitioner that he has reported the case to the coroner, it will be the duty of the registrar to suspend the registration of the death until he learns from the coroner whether an inquest is or is not to be held.

MEMBERSHIP of the Guild of St. Luke is open to all students and practitioners of medicine—both men and women—who are members of the Church of England, the clergy of which are eligible as clerical associates. The Guild was started in London, by a few medical students, over sixty years ago, and there are also now in London a Women's Ward and a Students' Branch, as well as a Midland Counties Ward and a Cambridge Ward. The Chapter of the Guild meets in each month of the academic year, and a festival service is held annually at St. Luke's tide, either at St. Paul's or Westminster Abbey. This year the service will be at the Abbey. Particulars of the objects and activities of the Guild and forms of application for membership can be obtained from the Secretary of the Guild of St. Luke, Room B.B., King's College, Strand, W.C.2.

THE winter session of the Post-Graduate College attached to the West London Hospital reopens on October 3rd, when the dean, Sir Henry Simpson, K.C.V.O., will read a paper on post-graduate education in obstetrics. Further information will be found in our advertisement columns.

THE Gilbert Blane medal for this year has been awarded to Surgeon Lieutenant Commander A. W. McRorie, M.B. This medal, founded in memory of Sir Gilbert Blane, is given annually to the medical officer who obtains the highest aggregate marks at the examination for promotion to the rank of surgeon lieutenant commander.

The British Medical Association:

ITS AIMS, WORK, AND CONSTITUTION.

THE British Medical Association, as stated in our introductory article on the Profession of Medicine, was founded in 1832 to promote the medical and allied sciences, to maintain the honour and interests of the profession, and to foster a feeling of friendship among its members. To attain these objects it holds periodical meetings for the discussion both of medical and scientific subjects and of professional affairs; it publishes the BRITISH MEDICAL JOURNAL; it maintains a reference and lending library; it has instituted lectures, and scholarships and grants for research. It thus concerns itself with every side of medical work—science, clinical medicine, public health, and the material interests of professional life. The British Medical Association, with a membership now of more than 33,000, is the oldest, largest, and most powerful British organization devoted to the welfare of the medical profession. It has recently acquired a fine building in Tavistock Square, London, for its headquarters, providing ample accommodation for immediate needs and space for future developments. These new premises, designed by Sir Edwin Lutyens, R.A., were formally opened in 1925 by His Majesty the King, accompanied by the Queen; and the beautiful wrought-iron gates erected as a memorial to the 574 members who fell in the war, by which the quadrangle is completed, were dedicated on that occasion by the Archbishop of Canterbury. The need for larger accommodation had become insistent owing to the remarkable growth in the central work of the Association during recent years, which had far outstripped the capacity of the premises in the Strand, which have now been acquired by the Government of New Zealand for its London offices.

The British Medical Association House, Tavistock Square, London.

Constitution and Administration.

The Association has Branches and Divisions throughout Great Britain and Ireland, and also in the Dominions, Colonies, and Dependencies. The Divisions are arranged territorially, and number, in all, 286. For certain purposes of administration or of scientific and clinical work, the Divisions are combined into 93 Branches. Members of Divisions elect representatives on the Branch Councils and also a member or members of the Representative Body, which is the governing body of the Association and determines its policy.

The Council is the executive of the Association. It is elected partly by the Divisions and Branches and partly by the Representative Body, and includes representatives of the Navy, Air Force, Army, and Indian Medical Services elected by the Representative Body. The Representative Body and Council elect standing committees to take charge of different subjects. Among these may be mentioned the Science, Medico-Political, Ethical, Hospitals, Public Health, and Naval and Military Committees. There are Committees also for the Dominions, Scotland, Ireland, and Wales; and for the working machinery of the Association, such as the Organization, Finance, and Journal Committees. The Insurance Acts Committee, elected partly by the Association and partly by insurance medical practitioners, is financed by the Association; it is the recognized executive and mouthpiece of the insurance practitioners of Great Britain.

Privileges of Members.

A member of the Association has the right—

1. To attend the annual and other general meetings of the Association and the meetings of the Division and Branch to which he or she belongs.
2. To take part by personal vote (or in some Divisions by voting paper) in the election of the representative of his or her Division in the Representative Body, and also in the election of members of the Council.
3. To receive by post the BRITISH MEDICAL JOURNAL, published weekly, which gives a full record, with commentary, of progress in clinical and scientific medicine and of medico-political affairs throughout the British Empire.
4. To receive the help and advice of the central office in any professional difficulty.
5. To use the Library as a reading room, and to borrow current medical or scientific books on payment of postage. Besides modern works and periodical medical literature—foreign as well as English—the library contains many books of historic interest.

The full benefits of the Association can only be secured by the co-operation of large numbers of the medical profession, for the greater the membership and the funds the more efficient and influential the organization. The Association during the past ninety-five years has been the direct means of benefiting every class of medical men and medical women. In asking for new members it looks not only to the older practitioners but also and especially to those recently qualified. To these a generous concession is made as regards subscription, and there is a special claim to their recognition of the work of the Association in improving the conditions under which they may hold appointments in the public services or in civil life. The Association's work for the Services is well known. It feels a special responsibility towards those members of the profession who by reason of their position are precluded from taking common action, and the events of this year have proved again its capacity to further their interests.

Subscriptions and Applications for Membership.

The ordinary subscription to the British Medical Association is 3 guineas a year for members resident in the British Isles, but this is subject to various exceptions. Thus, newly qualified practitioners elected within two years of registration pay half this sum up to the end of the fourth year after registration; medical officers on the active list of the R.N., R.A.F., R.A.M.C. (Regular), and I.M.S. pay 2 guineas; concessions are made also to members (in the British Isles) of forty years' standing, to members of ten years' standing who have retired from practice, to medical married couples residing together, and to whole-time teachers and research workers. The ordinary subscription for members living abroad is 1½ guineas, but some Branches have special local subscriptions. A member elected after June 30th pays half the subscription for that year.

All duly qualified British medical practitioners are eligible for election. Full particulars can be obtained from the Medical Secretary, British Medical Association House, Tavistock Square, London, W.C.1; the Scottish Medical Secretary, 6, Drumsheugh Gardens, Edinburgh; or the Irish Medical Secretary, 16, South Frederick Street, Dublin.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

SUSSEX BRANCH: BRIGHTON DIVISION.—A clinical meeting of the Brighton Division will be held at the Heritage, Chailey, on the afternoon of Saturday, September 24th. Members are invited to bring their wives, who will be conducted over the Heritage during the meeting. By the kindness of Mrs. Kimmins tea will be provided. A detailed programme will be announced later. Members intending to be present are requested to inform the honorary secretary as early as possible; also any members desiring to be taken by car are requested to write to the secretary, as there are plenty of seats available.

Meetings of Branches and Divisions.

CAPE MIDLAND BRANCH.

THE meeting of the Cape Midland Branch on July 23rd was the first medical gathering ever held in Humansdorp.

Dr. HANS GREEFF read a paper on bone grafting, which was illustrated by skiagrams. Dr. NORMAN WILSON, in a paper on diphtheria, laid special stress on the value of the Schick reaction as an indication of susceptibility or otherwise. A general discussion followed.

Dr. HANS GREEFF then demonstrated a urethral phosphatic calculus; a piece of articular cartilage which he had removed from the head of the radius, following an injury to the elbow-joint; a portion of a stomach which he had excised—the condition was one of ulcer of the lesser curvature. Dr. J. J. COULTON moved a vote of thanks to the readers of the papers, and Dr. GORDON ROBSON, on behalf of the visiting members, cordially thanked Drs. Coulton and Shanks for their hospitality.

A most enjoyable meeting was terminated by the visiting members dining at the Royal Hotel as the guests of Drs. Coulton and Shanks.

VACANCIES.

AYR COUNTY HOSPITAL.—Senior and Junior House-Surgeons (males). Salaries at the rate of £100, and £80 rising to £100, per annum respectively.

BATH CITY.—Assistant Medical Officer. Salary £600 per annum.

BATH: ROYAL UNITED HOSPITAL.—(1) House-Physician. (2) Assistant House-Surgeon. Salary £120 and £100 per annum respectively.

BIRMINGHAM CITY.—Medical Officer of Health. Salary £1,800 per annum.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—(1) Junior House-Surgeon. (2) Third House-Surgeon. Non-resident. Salary at the rate of £200 per annum each.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Junior House-Surgeon. Salary £110 per annum.

BRISTOL ROYAL INFIRMARY.—Senior Resident Medical Officer. Salary at the rate of £200 per annum.

CARDIFF CITY MENTAL HOSPITAL, Whitchurch, near Cardiff.—Senior Assistant Medical Officer (male). Salary £550 per annum, rising to £600, or to a married man £700.

DARLINGTON GENERAL HOSPITAL.—House-Surgeon (male). Salary £125 per annum.

DERBYSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer (male). Salary £600 per annum, rising to £700.

HOSPITAL OF ST. JOHN AND ST. ELIZABETH, Grove End Road, N.W.8.—Resident House-Physician (male). Salary at the rate of £100 per annum.

LEEDS PUBLIC DISPENSARY.—Honorary Dental Surgeon.

LISTER INSTITUTE OF PREVENTIVE MEDICINE, S.W.1.—Research Fellowship in Bacteriology. £500 per annum.

LONDON FEMALE LOCK HOSPITAL, 283, Harrow Road, W.9.—House-Surgeon. Salary at the rate of £150 per annum.

LONDON HOSPITAL, E.1.—(1) Physician. (2) Surgeon.

LONDON LOCK HOSPITAL, 91, Dean Street, W.1.—(1) Surgical Registrar; honorarium £100 per annum. (2) House-Surgeon at the Male Lock Hospital; salary at the rate of £200 per annum.

LORD MAYOR TRELOAR CRIPPLES HOSPITAL, Alton and Hayling Island.—Assistant Resident Medical Officer (male). Salary £300 per annum.

MANCHESTER: ANCOATS HOSPITAL.—House-Surgeon (male). Salary at the rate of £100 per annum.

MANCHESTER BABIES' HOSPITAL.—(1) Resident Medical Officer. (2) Junior Resident Medical Officer. Salaries at the rate of £125 and £50 per annum respectively.

MANCHESTER: ROYAL MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—(1) Resident Medical and Surgical Officers (unmarried). Salary £125 per annum. (2) Two Assistant Medical Officers (non-resident) for Out-patients' Department, Cartside Street. Salary £150 per annum.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland Street, W.1.—(1) Resident Medical Officer. (2) Out-patient Medical Officer (non-resident). Males. Salary at the rate of £150 and £125 per annum respectively.

NEWCASTLE-ON-TYNE: ROYAL VICTORIA INFIRMARY.—Resident Medical Officer (male). Salary £300 per annum, rising to £350.

NORTHAMPTON GENERAL HOSPITAL.—Two House-Surgeons. Salary at the rate of £150 per annum each.

NOTTINGHAM GENERAL DISPENSARY.—Resident Surgeon (male). Salary £250, rising to £300.

OXFORD: RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—(1) House-Physician. (2) Casualty House-Surgeon. Salary at the rate of £120 per annum each.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.—House-Physician. Salary £190 per annum.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.2.—House-Surgeon. Salary at the rate of £100 per annum.

ROYAL GWENT HOSPITAL, Newport, Mon.—House-Surgeon. Salary at the rate of £125 per annum.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL, Great Portland Street, W.1.—House-Surgeon. Salary £150 a year.

ST. PETER'S HOSPITAL FOR STONE, ETC., Henrietta Street, W.C.2.—House-Surgeon. Salary at the rate of £75 per annum.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.—Anaesthetist, twice weekly. Honorarium £30 per annum.

SEAMEN'S HOSPITAL SOCIETY.—(1) House-Physician at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C. (male). (2) House-Physician and House-Surgeon at the Dreadnought Hospital, Greenwich. (3) House-Surgeon at the Albert Dock Hospital. Salary at the rate of £110 per annum each.

SHEFFIELD ROYAL HOSPITAL.—Resident Anaesthetist (male). Salary £80 per annum.

STAFFORDSHIRE EDUCATION COMMITTEE.—Assistant School Medical Inspector (male). Salary £600, rising to £800.

TUNBRIDGE WELLS EYE AND EAR HOSPITAL.—House-Surgeon (male). Salary £150 per annum.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior House-Surgeon (male). Salary £250 per annum.

WEST LONDON HOSPITAL, Hammersmith Road, W.6.—(1) House-Physician. (2) Two House-Surgeons (males). Salary at the rate of £100 per annum.

WILLESDEN GENERAL HOSPITAL, Harlesden Road, N.W.10.—Clinical Assistant to the Out-patient Medical Department.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House-Surgeon. Salary £200 per annum.

CERTIFYING FACTORY SURGEONS.—The following vacant appointments are announced: Stamford (Lincoln) and Llanelly (Carmarthen). Applications to the Chief Inspector of Factories, Home Office, Whitehall, S.W.1.

MEDICAL REFEREE UNDER THE WORKMEN'S COMPENSATION ACT, 1925, for Districts of Chepstow, Newport, and Pontypool County Courts (Circuit No. 24). Applications to the Private Secretary, Home Office, Whitehall, S.W., by September 17th.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Tuesday morning.

APPOINTMENTS.

BURNELL-JONES, H. S., L.S.A., L.M.S.S.A., D.P.H.Oxon., Registrar at the Ear and Throat Hospital, Golden Square.

CAHILL, Lieut.-Colonel R. J., D.S.O., M.B., B.Ch., additional Medical Referee under the Workmen's Compensation Act, 1925, for the Districts of the Chester, and Nantwich and Crewe County Courts (Circuit No. 7).

HENNESSY, Robert F., M.B., B.Ch., House-Surgeon at the Armagh County Infirmary.

JORY, Norman A., F.R.C.S., Surgeon to the Ear, Nose, and Throat Department of the Royal Northern Hospital, Holloway Road, London.

British Medical Association.

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQUARE, W.C.1.

Departments.

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and Business Manager. Telegrams: Articulate Westcent, London).

MEDICAL SECRETARY (Telegrams: Medisecra Westcent, London).

EDITOR, *British Medical Journal* (Telegrams: Aitiology Westcent, London).

Telephone numbers of British Medical Association and British Medical Journal, Museum 9861, 9862, 9863, and 9864 (internal exchange, four lines).

SCOTTISH MEDICAL SECRETARY: 6, Drumsheugh Gardens, Edinburgh. (Telegrams: Associate, Edinburgh. Tel.: 4361 Central.)

IRISH MEDICAL SECRETARY: 16, South Frederick Street, Dublin. (Telegrams: Bacillus, Dublin. Tel.: 4737 Dublin.)

Diary of the Association.

SEPTEMBER.

13 Tues. London: Central Ethical Committee, 2 p.m.
15 Thurs. London: Insurance Acts Committee, 12 noon.
16 Fri. London: Public Health Committee, 2.30 p.m.
20 Tues. London: Organization Committee.
21 Wed. London: Medico-Political Committee, 2.30 p.m.
22 Thurs. London: Journal Committee, 2.30 p.m.
24 Sat. Brighton Division: Clinical Afternoon, The Heritage, Chailey.
27 Tues. London: Hospitals Committee, 2.30 p.m.
28 Wed. London: Finance Committee, 2.30 p.m.

OCTOBER.

5 Wed. London: Arrangements Committee. Meeting of Council Members, 11 a.m. Full Committee, with the Cardiff Members, 2.30 p.m.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcement of Births, Marriages, and Deaths is 9s., which sum should be forwarded with the notice not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

BIRTHS.

LITHERLAND.—At Milton Lodge, Wigan, on August 28th, to Dr. Doris Litherland (née Knowles), wife of Dr. Henry Litherland, a son.

MCROBERT.—At Maymyo, Upper Burma, on August 29th, to the wife of Captain Ronald McRobert, I.M.S., a daughter.

WEBSTER.—At Baroda, India, on August 7th, 1927, to Janet, wife of Captain W. J. Webster, Indian Medical Service, a daughter.

MARRIAGES.

GILLIES—PREECE.—At St. Paul's, Porth, Rhondda, on August 25th, Dugald Richard, M.B., Ch.B.St. Andrews, son of the late Hugh Gillies, Tayvallich, to Hilda Mary, youngest daughter of John Preece, Maesyrhaf, Porth.

ROSS—WRAY.—At Kisumu, Kenya Colony, on July 20th, by the Rev. H. Hitchen, Percy Ross, M.B., Ch.B.Aberd., younger son of Mr. and Mrs. J. Ross, Brora, Scotland, to Mercia Aline, eldest daughter of Mr. and Mrs. R. W. Wray, Tamarama Bay, Sydney, Australia.

DEATHS.

DRURY.—At Landon House, Halifax, Yorkshire, on August 22nd, Arthur Drury, M.B., C.M.Ed., aged 65 years.

ELLIOTT.—Suddenly, at 113, Grove Road, Walthamstow, on August 20th, Frank Percy Elliott, M.B., C.M., aged 57 years.

[The present issue being the Annual Educational Number, much current material is held over, and neither the "Supplement" nor the "Epitome of Current Medical Literature" is published this week.]